Gulstonian Lectures
ON
STERILITY IN WOMAN.

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LECTURE I.—PART II.
ITS NATURE AND AMOUNT.

THERE are several tests of relative sterility secondary to that implied in the paramount question, How many did she bear? These subsidiary tests are based on the ascertained course of natural fertility, and show the deviations from this course of the relatively sterile. Inquiry made by these tests implies a knowledge of how many children a woman will naturally bear, or is likely to bear, and of the natural order of births. They are as follows:—

1. When after marriage did she begin the career of childbearing? 2. How rapidly did the children follow one another? or, what was the interval between successive births? 3. When did childbearing cease? or, what was the age at the birth of the last child? 4. How long was the childbearing period of life? or, what was the interval between the beginning of the first pregnancy and the end of the last?

In studying population, these subsidiary matters are little regarded, for the statesman has direct interest only in the mutually related questions, How many are born? How many might have been born? What is the health of those born? The answers to these inquiries give him the actual relative sterility of the population, and in the case of a population this includes the absolute sterility. He may now attempt to increase or diminish the sterility of the people, not neglecting the health of the progeny, so far as it is related to fertility; and this control he will effect by raising or lowering the age at marriage. On the other hand, the physician, having care of individuals, not of a people, and advising each from year to year of life, has his chief interest in these subsidiary matters, which the statesman may not utterly neglect, but may leave to the care of the medical philosopher.

The importance of the question, How soon after marriage does a woman bear her first child? is self-evident, and it will be found to be more a test of sterility than it appears at first sight to be. Whitehead, founding on the observation of 541 married women of the average age of twenty-two years, makes the average interval between marriage and the birth of a first child to be eleven months and a half. Sadler says that married females do not become fruitful, on the average, during the first year of their nuptials, but nearly so. A great number of cases, he says, which he has collected, with a view of determining this point, gives three-fourths of them as producing their first child at the average of one year after marriage.

From the Edinburgh and Glasgow registers for 1855 I was able to make out this point in 3722 cases. But in these extracts from the register there are two sources of error, which prevent an exact comparison with the results of Ansell's more valuable table, for twins are excluded, being placed in the column of secundiparæ, not of primiparæ. (See Table II.) And, still more important, the great number of mothers whose children were stillborn is excluded. Now, twins affect specially young, immature, and quickly breeding mothers; their omission, therefore, from the column of primiparæ will tend to delay the estimated time of primiparity. Again, a similar delay will result from the omission of women having dead children from the primiparous column, for such women, when they bear a first living child, which may be in reality a second, third, or other child, will appear in the primiparous column with an over-estimated and erroneous retardation of primiparity.

The Edinburgh and Glasgow table gives a mean interval of about seventeen months between the marriage and the birth of a living child. It shows that fecundity is not demonstrated by a living child in the majority of cases till a year of married life has passed; nearly two-thirds of the whole beginning their families in the course of the second year of marriage. It also shows that there is no ground for presumption of sterility till the fourth year of married life is entered upon; for while of those three years married and less than four 133 bore a first living child, there were only 154 who did so in all the subsequent years taken together. Of the whole 3722 only about one twenty-fourth part began bearing living children after four years of married life had elapsed.

Ansell's table includes first stillborn children, and is corrected for twins, and gives us the data in 6035 cases. It is therefore better than the preceding, and better than any other of which I know regarding this point.

Ansell's table gives a mean interval of nearly sixteen months between marriage and the birth of a child. The majority of the women in Ansell's table bore their first children before the first year of married life had elapsed—nearly seven-eighths before the expiry of two years of married life. It also shows that there is no good presumption of sterility till the fourth year of married life is entered upon; for while of those three years married and less than four 421 bore a first child, there were only 292 who did so in all the subsequent years taken together. Of the whole 6035, only about $\frac{1}{21}$st part began bearing children after the third year of married life, and only $\frac{1}{15}$th part after the fourth year.

TABLE II.
Showing the Interval between Marriage and the Birth of a First Child.

Years married.	No. of births.
Less.	608
1	2390
2	437
3	133
4	61
5	32
6	27
7	12
8	5
9	5
10	1
11	3
12	4
13	2
14	—
15	1
16	—
17	—
18	1
Total	3722

TABLE III. (*from Ansell.*)
Showing the Interval between Marriage and the Birth of First Children.

Year after marriage.	No. of first children.
1	3159
2	2163
3	421
4	137
5	69
6	26
7	21
8	11
9	7
10	7
11	5
12	4
13	3
14	2
Total	6035

It may therefore be held that married women delaying the commencement of fertility beyond sixteen months are already exhibiting a degree of relative sterility; and this conclusion is quite in keeping with the rest of our knowledge of this subject.

The second question proposed is, How rapidly do the children in a family follow one another? or, What is the interval between the births of successive children? Great authors on population used to hold that breeding women never exceeded, in rate of prolificness, a child every two years; but, like many of the other principles on which Malthus and the rest based their theories, this has proved to be false. With our present knowledge, we can assert that Malthus erroneously endowed womankind with a degree of relative sterility; for women who breed do so at an average rate of a child every eighteen months, or nearly so.

I here give a table compiled from the Edinburgh and Glasgow registers, which makes the average interval between successive children nearly twenty months. But this requires several corrections, which will, on the whole, tend greatly to reduce the amount. Twins are included, and counted as two children. But a source of greater error is the exclusion of dead children, whether one or more. This last error might not be grave, or even an error at all, in the

view of an economist such as Malthus; but reckoning for it would make his actual error comparatively much greater. Table IV., like Table V., made up from Ansell, is not

TABLE IV.

Showing the Average Duration of Marriage at Birth of each Successive Child, and the average Interval between the Births of the Successive Children.

Number of children.	Number of mothers.	Duration of marriage in months.	Average interval between successive births.
1	3722	17	—
2	2893	38	19·0
3	2534	64	21·3
4	1982	90	22·5
5	1543	115	23·0
6	1221	137	22·8
7	848	162	23·1
8	641	181	22·6
9	425	203	22·5
10	222	225	22·5
11	152	235	21·4
12	61	246	20·5
13	34	263	20·2
14	11	281	20·1
15	6	280	18·7
16	2	336	21·0
17	2	252	14·8
18	1	252	14·0
19	1	204	10·7
	Average		19·9

correctly described as giving the average interval between births, but as giving the average interval between the marriage and the birth of the child, divided by the number of children born, which is a near approximation to what is wanted.

TABLE V. (*from Ansell.*)

Showing the Mean Time after Marriage of Successive Births, and the Average Interval between them.

Order of birth.	Mean time of birth after marriage.	Average interval between successive births.
1st child	1·32 years	—
2nd ,,	3·02 ,,	18·0 months
3rd ,,	4·83 ,,	19·0 ,,
4th ,,	6·69 ,,	20·0 ,,
5th ,,	8·53 ,,	20·0 ,,
6th ,,	10·28 ,,	20·5 ,,
7th ,,	11·92 ,,	21·0 ,,
8th ,,	13·47 ,,	20·0 ,,
9th ,,	14·93 ,,	20·0 ,,
10th ,,	16·33 ,,	20·0 ,,
11th ,,	17·65 ,,	19·0 ,,
12th ,,	18·85 ,,	19·0 ,,
13th ,,	19·87 ,,	18·0 ,,
14th ,,	20·71 ,,	18·0 ,,
15th ,,	21·41 ,,	17·0 ,,
16th ,,	22·01 ,,	16·5 ,,
17th ,,	22·54 ,,	16·0 ,,
18th ,,	23·02 ,,	15·0 ,,

Ansell's table does not require correction for twins or for dead-born children, and its value may be judged by the statement, indefinite though it is, that it is based on more than 25,000 observations. The average interval, as calculated from them, is eighteen months. Ansell's table may be studied, further, with a view to a statement of the average interval in those who have not excessive families, but families of natural or normal number. For those mothers who have shown excessive intensity of fertility, either by a high number of births or by excessive rapidity so long as childbearing continued, are mixed up in each successive row of figures with those that are normal, or nearly so. Now, looking at the rows of figures of families varying from four to ten, which show intervals of twenty to twenty-one months, we are safe in stating the average interval for normal families as above twenty months, yet, probably, considerably under two years.

It may therefore be held that a married woman who, during childbearing life, does not have a child every twenty months is exhibiting relative sterility.

The third question is, When did childbearing cease? or, What was the age at the birth of the last child? Now, it is the rule to confuse the childbearing period of life with the period during which a woman menstruates, and this is a great mistake. It is only a part of this that, in married life, is occupied by childbearing, except in rarest cases, such as have never come under my observation. When a woman begins childbearing she generally, under favourable circumstances, continues her career of fertility steadily till her last child is born.

The registers tell us when women actually begin to have children, and I have already made use of such information, but we have no data nearly sufficient to decide what is the average age of commencing fertility; we may, however, be sure, from what we do know, that it is not the age of puberty or of commencing menstruation, and that it is not the age of nubility or age at which procreation is commenced with the greatest advantage to mother and progeny. It is evidence of good conduct in the race that we cannot get sufficient data, there being very few unions permitted in early life. The great mass of our women are, fortunately, married within the limits of nubility, or the marriageable age. Nevertheless, it is very desirable that we should find out what is the mean age of commencing childbearing.

Regarding the time of cessation of childbearing we have more exact information, and it shows well the distinction that must be made between the cessation of menstruation and the cessation of procreation. Menstruation ceases at from forty-five to fifty years of age, but childbearing ceases at an average age of thirty-eight. This cessation arises from no imperfection or decay of organs, that has been demonstrated, but it may be due to that nevertheless. It is highly probable that its main cause is a cessation of functional vigour or activity, for it is delayed in women who have begun their fertility late in life.

On the subject of the cessation of childbearing our best information is derived from Ansell, whose calculations are based on 4899 observations, restricted to those in which both the father and mother survived the childbearing age of the latter, a point which was determined as regards each case in accordance with a scale already given, whose chief governing rule is not to suppose a woman under forty-four years of age to have borne her last child until she has been for ten years barren. The quinquenniad 39–43 is that at which the largest number ceased to bear children. Thirty-eight years is the mean age of mothers, married at the mean age of twenty-five, at the date of the birth of their last children in cases where childbearing was not prematurely terminated by the death of either parent.

The productive period begins earlier, and it is protracted to a later age, in cases where the children are numerous than where they are few. This protraction is shown by the following table:—

TABLE VI. (*from Ansell.*)

Showing the Mean Age of Mothers at the Birth of their last Child in Families of different numbers.

Number in family.	Mean age of mothers.
1	31·08
2 or 3	34·21
4 or 5	37·04
6 or 7	39·21
8 or 9	40·61
10, 11, or 12	41·74
13, 14, or 15	42·83
16 or more	44·32

Women have, in their career, and with a view to our present subject, many stages in life. There is the age of puberty or of commencing menstruation, and this is to be distinguished from the age of commencing childbearing, regarding which we have no data adequate for a decision. But the age of commencing childbearing, though it may be identical with that of commencing menstruation in individual cases, is certainly not nearly so in the mass of women, being fortunately considerably delayed. Then, after the age of commencing childbearing comes the age of

nubility or marriageable age, that at which a woman can enter on married life with the best chances of having a healthy and not excessive family. After the age of nubility comes the age of cessation of childbearing, which, as already said, is thirty-eight for women married at twenty-five years of age. A woman may bear children after this age, or even after the cessation of menstruation, but such cases are exceptional and rare. The last stage in their career is usually the cessation of menstruation at an age of forty-five to fifty.

There is a mean age of puberty and of commencement of possible procreation, a still farther advanced mean of commencing procreation, a still farther advanced mean of nubility or fitness for procreation, a still farther advanced mean of cessation of procreation, and lastly comes the mean of cessation of menstruation and of possible procreation. Most of these stages of woman's life have their analogues in the female life of the lower animals which are best known to us, and some of them have analogues in the life-history of plants. There can be no doubt that they all have their coördinate physical states of the genital organs, and in this department there has been much successful anatomical investigation, especially as regards puberty, nubility, and the cessation of menstruation.

Writing regarding the age of cessation of childbearing, Whitehead makes the following pertinent remarks: "The sum of the ages of the individuals (38) recorded in the preceding table, at the time of their last delivery is 1586, giving an average of 41·73 years; the average age of the same individuals, at the time of their last menstruation, is 47·54 years; so that a period of nearly six years is here indicated, during which, although the menstrual function continued to be more or less efficiently discharged, and the health good, aptitude for procreation did not exist. They were all placed under equally favourable circumstances for the continuance of childbearing so far as regarded their matrimonial position. ..... A like period of uterine quiescence," he adds, "is observed before childbearing begins."

The average cessation of childbearing is for all women no doubt between thirty-five and forty years of age, and a woman in whom this career ceases earlier shows relative sterility.

To the question, How long does childbearing continue? it is easy to give some answer; for if the average age at the commencement of childbearing is twenty-six years, and the mean age at termination is thirty-eight, the average duration of childbearing is twelve years. The duration of fertility will be the number of pregnancies multiplied by nine (months) added to the number of intervals multiplied by nine (months). It will vary therefore from a case of one-child sterility, with nine months of the childbearing period of life, to a case of ten-child fertility, with a childbearing period of life of 171 months, or about fourteen years; and to a case of twenty-child fertility, with very much less than thirty years of childbearing life; very much less, because women of this great and excessive prolificness do hurry their children into the world to get through the high number.

From Ansell's table of 4899 married women, whose ages at the birth of their last children were known, and where both parents survived the childbearing age of the mother, I have constructed the following table to show the nearest figures I can give to the actual lengths of childbearing life in families of different members. The commencement of childbearing at twenty-six years of age is, in all cases, assumed, because it really was very nearly the mean age in Ansell's collection.

Table VII. affords us further valuable information as to the duration of childbearing in families which reach the normal limit of about ten, and we see that it is about fifteen years. A woman then may be regarded as relatively sterile who, married within the years of nubility (about 20-25), ceases to have children within fifteen years from the birth of her first child.

We must now try to answer the last and comprehensive question, How many children does a woman bear? On the answer to this depends the settlement of the amount of relative sterility. It cannot be satisfactorily answered directly, on account of the paucity of data, but such answer as we can give is corroborated by the various subsidiary answers which we have just furnished. We shall not enter on subjects important politically, such as the numbers in actual families, the number to a marriage, &c., because these are foreign to our present inquiry.

In the district of St. George's-in-the-East the Statistical Society found, among the poorer classes, eighty mothers who had been married at ages varying from fifteen to nineteen, and who had lived in wedlock at least thirty-one years, or all the childbearing period of life. These fertile wives had borne on an average 9·12 children. Considering the undoubted existence of evident sources of error, all tending to unduly diminish the average amount of fertility, we may safely say, using the data of St. George's-in-the-East, that ten is about the average fertility of fertile marriages lasting during the whole childbearing period of life. The average age of marriage in England is twenty-five, and consequently the production should be less than ten, the women living in fruitful wedlock from twenty-five till the end of the childbearing period of life, not all the childbearing period.

The actual fertility of fertile marriages in England, if only nine in ten wives have living children, is, according to Farr, 5·2; but with a view to contrast with the data of St. George's-in-the-East and of Ansell this figure needs correction; for in making it up, the condition of living in wedlock till the end of the childbearing period of life is omitted. If that condition were not omitted, there would of course be a large increase of fertility of wives in England. Ansell's collection includes 1767 spinsters married to bachelors at a mean age of twenty-five, and living in fruitful wedlock till the end of childbearing, as calculated by a scale already given, and the production was 5·7, or nearly 6, a figure which I regard as indicating a less fertility than that of Englishwomen generally.

TABLE VII. (*from Ansell.*)

Showing the Average Age at Cessation of Childbearing in Families of different numbers, and the Time occupied in Childbearing, estimated at the rate of eighteen months for each child, in families of less than ten children: the mean age of mothers at commencement of childbearing being twenty-six years, and the parents both surviving the childbearing age of the mother according to the scale of Ansell (p. 50).

Number of family.	Number of cases.	Mean age of mothers.	Time occupied in childbearing.
1	244	30 years & 6 months	1 year & 6 months
2	401	32 „ 11 „	3 years — „
3	425	34 „ 5 „	4 „ 6 „
4	485	35 „ 10 „	6 „ — „
5	565	36 „ 11 „	7 „ 6 „
6	494	38 „ — „	9 „ — „
7	490	39 „ — „	10 „ 6 „
8	467	39 „ 8 „	12 „ — „
9	387	40 „ 6 „	13 „ 6 „
10	312	40 „ 10 „	14 „ 10 „
11	239	41 „ 1 „	15 „ 1 „
12	170	41 „ 7 „	15 „ 7 „
13	115	42 „ 5 „	16 „ 5 „
14	43	41 „ 10 „	15 „ 10 „
15	34	42 „ 8 „	16 „ 8 „
16	10	43 „ 6 „	17 „ 6 „
17	10	43 „ 5 „	17 „ 5 „
18	6	44 „ 7 „	18 „ 7 „
19	1	45 „ — „	19 „ — „
20	1	45 „ — „	19 „ — „

The fertile wives of England, without the condition of persistency in married life till the end of the childbearing period of life, bore 5·2 children. Ansell's mothers in the upper classes, married at a mean age of twenty-five, and living in wedlock till the childbearing period of life was passed, bore on an average 6 children. The fertile wives of St. George's-in-the-East, a poor class, living in wedlock all the childbearing period of life, bore above 9 children. Each of these statements yields some corroboration of the others; and, keeping in view some further evidence, they seem to justify us in holding that a healthy woman, living in wedlock all her childbearing life, under the most favourable circumstances for natural procreation, should have a family of 10; or women, under such circumstances, bearing fewer than 10 are relatively sterile, and the sterility is inversely as the number. Further evidence to the same effect is got by referring to the data derived from the registers of Edinburgh and Glas-

gow for 1855. There (Fecundity, p. 125, 2nd ed.) I found that, in fertile wives married at various ages, there was a fertility of between seven and eight after the lapse of fifteen years of marriage, counting to the birth of the last child; and fifteen years is full allowance for persistence in fertility. Now, as many women are married some years after the best period for commencing childbearing, we may, by making allowance for such delay, raise the number from between seven and eight to ten.

There are many women who bear families above ten in number, and it is desirable to devote to them further special consideration. Such families are, on the whole, abnormal or excessive. For many an individual woman a family less than ten is excessive. We have, indeed, spoken of the occasional calamitous character of only-child fertility. But there is a mass of evidence tending to show that a family, in the average female, rising above ten, begins to be excessive and increasingly so as the figure increases. It may seem paradoxical to bring the consideration of excessive families into a lecture on sterility, but in the next lecture the paradoxical character of this proceeding will disappear.

The bearing of a first child is well known to be very dangerous, often fatal, to the mother. After this she comes into a period of childbearing which is the safest, and which continues while she has a natural or ordinary degree of fertility. The danger of primiparity is, for a fertile woman, inevitable, but the special danger of multiparity is incurred only when a family is excessive; and I hold this danger to be good evidence (along with other) of excessiveness. It is, at the same time, to be kept in mind that danger has been demonstrated to rise with increasing elderliness; but elderliness of the mother is an essential element in a question of excessive family. I extract from my work on Fecundity, &c., the following table, whose composition is there stated:

TABLE VIII.

Showing a Comparative Percentage of Deaths in Successive Labours.

Number of pregnancy.	Number of mothers.	Number of deaths.	Percentage.	Or 1 in
1	3722	254	6·82	15
2	2893	60	2·07	48
3	2534	64	2·52	39
4	1982	39	1·97	51
5	1543	31	2·01	49
6	1221	28	2·29	43
7	848	16	1·88	53
8	641	15	2·34	42
9	425	13	3·06	32
10	222	9	4·05	24
11	152	5	3·28	30
12	61	1	1·64	61
13	34	4	11·77	8
14	11	—	—	—
15	6	1	16·66	6

It does not give actual mortalities, but only such mortalities as may be compared with one another with a view to making out the peril attending confinements of different numbers.

In the sequel I shall give further and varied evidence as to the excessiveness of families above ten. This evidence is based not on the danger to the mothers only, but on the nature of the production—that is, on the occurrence of twins, of weakly children, and of idiots.

THE first annual general meeting of the friends and subscribers to the Hampstead Home Hospital was held on the 26th ult. The expenditure of the year left a balance in hand of £103 12*s.* 1*d.* It was proposed to raise a fund of £5000. The hospital, as is well known, is a pay hospital, and the patients' payments amounted to £35 18*s.* Experience has shown the necessity of adding to the institution the adjoining building, and so provide accommodation for the three classes of patients which seek admission, viz., those who can pay 15*s.*, 25*s.*, or 42*s.* and upwards per week. Mr. Henry C. Burdett stated that the experience gained by the authorities of the Home Hospitals Association showed that if the general hospitals would open paying wards their financial difficulties would cease.

Clinical Lecture
ON
PNEUMONIA WITH PERICARDITIS.

Delivered at the Westminster Hospital.

BY OCTAVIUS STURGES, M.D.,
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GENTLEMEN,—True pneumonia, commonly, if not invariably, associated with pleurisy, is not very rarely associated with pericarditis also. This latter combination, although receiving less attention than it deserves, is a form of the disease which is interesting on many accounts, and especially as regards its treatment. For this reason I take advantage of an example of the kind lately in Burdett ward to make a few observations upon the subject this afternoon. The case, very briefly abstracted from notes of Mr. Hebbert, the medical registrar, is as follows:—

William M——, aged thirty-two, a porter, of free drinking habits, but not a drunkard, and of whom it was stated with much distinctness that "he had never been laid up in his life," was brought to hospital on Dec. 27th, with the signs of acute pneumonia of the left lung. The initial rigor had occurred five days before, after a definite exposure, but for some weeks he had not been in his usual health, complaining of cough, weakness, night sweating, and some wasting, yet without having to keep his bed till the commencement of the acute attack. Cough, rusty sputa, great thirst, and an unusual degree of prostration had been noticed during the early days of the pneumonia, and for two nights before admission he had been sleepless and delirious. The circumstances of his home being unfavourable for suitable treatment, Dr. Tebay, who first saw him, advised his being sent to hospital. On admission it was apparent that the case was one of extreme severity, and, as it happened, the man survived only four days. Yet, it may be remarked, that with a pulse of 140, respiration reaching, and sometimes exceeding, 50, dry and brown tongue, with restless delirium, but as yet no signs of actual sinking or collapse, and death four days off, the highest temperature was 102·4°. During the succeeding days it never exceeded that point. The observation may be added to many others of a similar kind, showing that temperature is of itself a fallacious guide in pneumonia. It is not necessary to enter into details of the man's daily progress. On the first day signs of consolidation of the upper lobe of the left lung were noted as well as increased area of heart dulness. On the second day a loud pericardial friction was heard at the base of the heart, a rubbing increased in intensity by pressure, the heart's apex impulse being imperceptible. Insomnia, delirium with hallucinations, breathlessness, and such weakness that on one occasion (three days before death) the patient fainted on being gently raised for examination, were so many symptoms showing clearly enough an extremity of peril which could only admit of hope in consideration of the nature of the disease, and the absence of any physical signs denoting the breaking up of the inflamed lung. Early in the morning of the fifth day, counting that of admission, the man died, mainly by asthenia. The treatment had been by means of nutrients frequently given, with brandy in varying doses, but both food and stimulants were swallowed with great difficulty; and, as in many other fatal cases, we experienced the practical difficulty—too little considered until actually encountered—of putting in force all that was meant by the late Dr. Hughes Bennett by the term "restorative treatment." The condition of the organs found after death I now show you. A consolidated upper lobe of the left lung; hepatisation passing into grey, but with no sign of softening, and no disorganisation of lung tissue. The rest of this lung is barely congested, and the right lung is healthy. The heart is slightly hypertrophied as to the left ventricle, and the valves natural, but over the whole anterior surface it is covered, as you see, with shaggy and coherent lymph, which can be easily stripped off, exposing old fibrous thickening of the pericardium proper, while beneath this, again, is a layer of adipose tissue. The muscle of the heart is very soft, and in places there is unclear excess between the muscular fibres, but on the whole the tissue is

fairly normal. The right ventricle is one-fifth of an inch thick, the left three-fifths, and the weight of the heart is 11¾ ounces.[1] Both the pericardial sac and the left pleural cavity contained about ten ounces each of turbid fluid. There was no disease of any other organ, and especially it must be mentioned that the kidneys were normal.

Here then is an ordinary idiopathic pneumonia, not very extensive, not purulent, and occurring in a young and active man; yet it ends fatally, owing, as we must suppose, to the pericarditis which accompanies it. This concurrence of pneumonia and pericarditis claims attention, as I have said, on many grounds: it has a special significance in relation to the pathology of pneumonia, it lessens considerably the prospect of recovery, and in so doing it raises afresh the question of treatment, inasmuch as the great law of spontaneous recovery, which makes most of us content to leave pneumonia undrugged, no longer seems to apply.

Pericarditis is not very uncommon with simple pneumonia. Out of seventeen examples illustrating the very unusual occurrence of death in the latter disease (all the instances of the kind I could gather from twenty years' post-mortem record at St. George's Hospital[2]), as many as five had pericarditis and two others accumulation of fluid in the pericardial sac. This pneumonic pericarditis, unlike the rheumatic, has no concurring endocarditis; it seems like a mere extension, by a sort of sympathy, of the pleural inflammation to the neighbouring serous membrane. The ordinary features of the pneumonia are not thereby changed, except, indeed, as to the chances of recovery, while, in many instances, the existence of pericarditis is undiscovered, and probably undiscoverable.

Clinically speaking, it must be remembered that both the recognition of pericarditis and the determination of its age are precarious and uncertain. The lung inflammation we detect at once, and follow easily from stage to stage; but a friction-sound is not a necessary sign in pericarditis, and may indicate either the advent of the inflammation, or such decrease of its fluid as suffices to bring the inflamed surfaces together. In the case before us friction was not audible until the second day after admission; yet post-mortem examination made it quite certain that the pericarditis was of much earlier date. In a young man under my care some years ago in the same ward, a case very similar to this one, friction rub preceded the pneumonia by nearly three weeks; it then subsided; reappearing, however, shortly before death, which was due (as examination showed) to a simple pneumonia which had lasted six days. Had this patient been admitted late, like the other, it is easy to see how the second occurrence of rubbing might have been misunderstood.

You are not to think from these two cases that pneumonia with pericarditis is commonly fatal. Far from it. It is a specially evil factor, for reasons that we shall see. To what degree it diminishes the prospect of recovery I am not prepared to say; but, on the whole, I think that pericarditis along with pneumonia is more conspicuous for its tendency to lengthen out the latter disease, and so to deprive it of the quick convalescence which is one of its striking characters, than for its tendency to end fatally. Curiously enough, the very last case of pneumonia admitted under my care before this one I am speaking of was an illustration of this. A girl of seventeen (Fanny S——, Harpur ward), in the course of a most characteristic pneumonia, showed signs of pericarditis, first by increased area of cardiac dulness, and next by friction-sound; and although the proper crisis happened on the seventh day (being the fourth from admission) convalescence was not established until three weeks later. Yet the girl made a complete recovery under treatment such as I have described.

Pneumonia seen in this connexion has a special interest pathologically. The occurrence seems to supply an additional argument to the many others that have been adduced to favour the belief that the affection we call by this name is something more than a mere lung inflammation; rather that it is a complex morbid condition not limited to any one organ and having elements of danger away from the part which is the chief seat of its activity. Pericarditis is a secondary, not a primary, affection; it is known to us chiefly in connexion with acute rheumatism and septicæmia, yet it may be the very first sign of an inflammation which we take pains and use names to describe as primary and idiopathic, and which, moreover, puts in a distinct claim to be so regarded, not only on anatomical grounds, but also from its habit of occurring with almost unexampled suddenness to previously healthy people.

But more to the present purpose is the question of treatment. Here is a patch of lung consolidated, as you see, by recent inflammation, yet not structurally altered. The condition is not one which would of itself be fatal. From what we know of pneumonia we are justified in saying that death was due in large measure to the pericardial inflammation. The question then arises, What is the proper treatment for this form of pneumonia? We have two acute inflammations side by side; that which concerns the lung we are taught to regard nowadays as an affection which is to be nursed and fed rather than drugged; but pericarditis is an inflammation which, even according to authors who are the least in love with medicinal treatment, needs active remedies, bloodletting, counter-irritation, and opium, for its recovery. We are thus placed in a real dilemma, for by no exercise of ingenuity can we obey two opposite sets of indications. Pneumonia is to be treated in one way, pericarditis in another; as to the treatment of the two in combination, authors are mostly silent. It is legitimate, therefore, to consider the question for ourselves and by the light of nature. What the books say or imply is this: Pneumonia has a tendency to recover and exhibits that tendency most when left to itself; but pericarditis has no such tendency; it stands in need of remedies, of the very remedies, as it happens, which are now discarded as worse than useless in the case of pneumonia. If that doctrine be true, the difficulty of treatment in such a case as the present seems insuperable. But is it true?

Call to mind the course and the termination of any examples of pericarditis you may have seen. The affection is so closely connected with acute rheumatism that you will probably think of a case of that kind. And what happens there? As everyone knows it is this: first, there is a friction sound heard at the heart's base; next, this rubbing ceases and you get instead signs, obscure or manifest, of the presence of fluid in the pericardial sac; by-and-bye, with the disappearance of these signs, friction is again audible, until, this ceasing, the sounds of the heart come out once more clear and distinct, but, probably, with a systolic murmur. Such signs, as you very well know, indicate to us the ordinary course, the natural history, of rheumatic pericarditis. They tell us of the pericardium, at first inflamed, presently bathed in a fluid which both serves as a fomentation and secures the two surfaces against the pain of rubbing or the danger of sticking, and next of the absorption of that fluid and, so far as the pericardium is concerned, the end of the inflammation. This, I say, is the common course of pericarditis; and how can we usefully interfere with it? What do you want? It is true, unfortunately, that this is not all, especially that in rheumatic pericarditis it is not all. While we are bleeding and blistering in some sort of protest against this exocardial noise, and influenced not a little by the loudness of it, there is going on within the heart, unheard, unfelt, often unthought of, a process of change almost certain to be permanent, and of which you get the first notice at the moment you are congratulating yourself on the success of your "active treatment." Rheumatic pericarditis, as the herald of mischief to the cardiac valves, is formidable enough no doubt, but as for the exocardial part of it, I am content to leave that alone; its natural course is towards recovery, and although it be true that adhesion, hydropericardium, and myocarditis are occasional consequences of pericarditis, I am not informed of any method of treatment calculated to prevent these disasters. My chief care and thought, so far as drugs are concerned, is for the non-recovering endocardium, and the more so because the noise outside prevents its speaking for itself. It is always legitimate, therefore, to ask for remedies in *rheumatic* pericarditis, not on its own account, but because of the valve inflammation, of which it gives warning, an inflammation whose natural course unchecked is the very reverse of beneficent.

But pneumonic pericarditis is unlike the rheumatic in that there is not the same sympathy on the part of the endocardium. The sanction for drugs, therefore, arising out of the jeopardy to the valves, which the rubbing implies in acute rheumatism, is absent. What then! is pneumonic pericarditis to be left to itself? I am bold enough to think so until someone will tell me explicitly what good he hopes to do—what kind of beneficial change, I mean, he thinks to produce in the inflammatory exudation—by what is called active interference. Pneumonia tends to recovery, and so

[1] The above description is taken from the Report of the curator and pathologist, Dr. Hebb.

[2] Natural History of Pneumonia, Append D., p. 296.

does pericarditis; that tendency may be thwarted in several ways in both cases, and in the case of the last most, but it is equally apparent in both.

But, you say, pneumonia combined with pericarditis is apt to end fatally. Yes, but why? Not because of the pericarditis, but because of what pericarditis entails. Look at the specimen now before you. Here is an inflamed pericardium, not adherent (there was just fluid enough to keep its surfaces apart), not purulent, not greatly harmful in itself, but comparable in its course and origin as well as in its microscopic characters to the inflammatory exudation of simple pleurisy. But its situation makes all the difference. The chief clinical features of pericarditis, and that which constitutes its immediate danger is the cardiac weakening it produces. Hence it is that dyspnœa, faintness, and the sensation and aspect of "cardiac anxiety," are common symptoms of the disease; hence, also, it is apt to be fatal by way of syncope or asthenia, and has for its frequent consequence, where death is delayed, pulmonary œdema. This cardiac weakening is due, no doubt, in many instances, to muscular degeneration, fatty or fibroid, the sequel of a myocarditis which is itself due to the pericardial inflammation. But not seldom before this change has taken place, at the very outset, indeed, of pericarditis, its effect upon the action of the heart is apparent; and the more so when from any cause the organ is already embarrassed. Why that should be I need not discuss here; that it is so every clinical student will admit.

Well then, if weakening of the heart, and especially of the right ventricle, be the consequence—the invariable consequence, we may say, more or less obvious, according to circumstances—of pericarditis, and its most present danger; if syncope and asthenia and pulmonary stasis are favourite modes of dying in that affection, what morbid condition is there that we should sooner avoid in such a disease as pneumonia? Consider how in pneumonia all the strain, so to speak, falls upon the right heart and the right ventricle; how its prognosis, and treatment, and varying fatality depend upon that cardinal fact. Ought we to be surprised, then, to find that pericarditis is an especially evil associate for pneumonia, insomuch that, other things being equal, its presence or absence makes all the difference between life and death? In speaking of pneumonia, as is now the custom (and the truth under our present mode of treatment), as a disease that commonly recovers, we are not to forget that it is always perilous. It habitually recovers, it is true; but barely so—it has nothing to spare. And just as the old treatment by semi-starvation and bleeding often sufficed to kill it (as we have the strongest grounds for believing), so likewise may the untoward occurrence of pericarditis. But there is nothing in this to give sanction to bloodletting and blistering the surface of the chest. We are told, indeed, that the effect of loss of blood is to produce the very degeneration which pericarditis is apt to produce; but with our school of therapeutics, at all events, that is no indication for such treatment. That death was inevitable in the present instance it would be rash to say. But such cases will die occasionally with every advantage of early treatment and skilful nursing, and we see the reason why. Pericarditis occurring along with pneumonia makes the prognosis more grave; it may modify some of the symptoms, and even require special treatment for some of them (as, for instance, when the pain is severe or when that restless delirium occurs which was a feature in our present case), but the inflammations are similar in their course and progress; both tend to recovery, and in both, so far as we know, such recovery is best promoted by precisely similar means. There is no reason to suppose that the several dangers which beset the two morbid conditions respectively, and which need no doubt appropriate treatment as they arise, may be escaped in the one case any more than in the other by active measures, or that what are called the indications for treatment in pneumonia are at all disturbed by the concurrence of pericarditis.

And, indeed, it is difficult to understand how and why in the general revolution of belief which has finally disposed of the doctrine that bloodletting, and blistering, and other "antiphlogistic" treatment can arrest the course of inflammation, pericarditis should have escaped any more than pneumonia. For this question is no longer one of argument derived from the natural history of disease; it is matter of experience. And in this, as in other respects, the two affections stand very much on the same level. Both were selected for bleeding and mercury at the same time and for the same reasons, and with similar disastrous results. Bouillaud, who fifty years ago was "jugulating" pneumonia, was jugulating pericarditis also, and he lost six patients out of eighteen in the process. Even Sir Thomas Watson, although he bled less, was yet more emphatic in commending the "free and unsparing use of mercury, so as to get and to keep the gums sore." And if you read his lecture as he spoke it (not, I suppose, as modern editions give it), you will see that under such treatment pericarditis was a much more formidable disease than it is now. It was the "firm conviction" of that great physician that when the to-and-fro sound had manifested itself the patient would either die outright, or else survive only for a time, and at the expense of an adherent pericardium. If that is far from being our experience now what is the inevitable inference? There are, I repeat, occasional symptoms in both pericarditis and pneumonia which may call for the lancet, for counter-irritation, for digitalis. I do not now speak of these; but for the rest, we may say with confidence that just in proportion as antiphlogistic treatment has relaxed, from the practice of Bouillaud to the shadowy thing of to-day with its exceptions and reservations, so has the complexion of acute disease altered for the better, and that this observation, applicable especially to pneumonia and pericaditis, is as true of the one as of the other.

NOTES ON SURGERY.

By WILLIAM S. SAVORY,
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On the Treatment of Enlarged Prostate.

WHEN complete retention of urine from enlarged prostate occurs, it frequently happens that the introduction of an instrument is followed by temporary return of power to micturate; and in other cases of partial retention it is well known that the occasional passage of an instrument will for a while restore the ability to empty the bladder almost completely without help. The cause of the difficulty being a mechanical one, I suppose there can be little doubt that the introduction of an instrument does good in this way by pressing aside that portion of the enlarged prostate which is most immediately concerned in producing the obstruction. Now, much more good in this direction, and good, too, which will last much longer, is often gained by retaining a catheter for some time after it has been introduced—say for one or two hours or so, as the patient may be able to bear it without distress. This plan is well worth trying in most cases of the kind. When an instrument has been passed, whatever difficulty there may have been in its introduction has been overcome, and the patient is subjected to little or no additional trouble by its retention for a short period. I may add that for this purpose a silver catheter appears to me to be of more service than a flexible one. It will be observed that this plan of repeatedly retaining an instrument for an hour or so after it has been passed is quite distinct in principle and purpose from the practice which has been advised, and is sometimes adopted, in cases of complete retention, or of very frequent micturition, or where there is unusual difficulty in the introduction of an instrument, of retaining it for many hours or even days together. The object here is either to escape a difficulty which may become insuperable or to avoid the necessity of passing an instrument so frequently as to make this a source of grave irritation and further mischief. Here, unfortunately, the proposed remedy is often worse than the evil. The plan now advocated has been suggested with the view of taking advantage of the passage of a catheter, when it is required to relieve the bladder, to retain it for its effect upon the prostatic portion of the urethra; for the good it does in this way of restoring or improving the power of micturition, or possibly by pressure promoting in some degree absorption. In speaking on this subject, I would add that in my experience, as in that of others, in cases even where the prostate is considerably enlarged, it is often easier to introduce a catheter with an ordinary curve than the instrument which is especially made for cases of this description. Surgeons know very well that sometimes when a prostatic catheter cannot easily be passed, an instrument with a much smaller curve will easily slip in. I fancy that the advantage

on the side of the smaller instrument is more common than it is generally supposed to be. With me, at least, it is the rule; and so, to relieve the bladder in cases of enlarged prostate, I should take first an instrument of full size with an ordinary curve, or a curve not exceeding the quadrant of a circle two inches or so in diameter.

On the Treatment of Stricture of the Urethra.

It may be well from time to time to call attention to the still prevalent practice of treating all cases of stricture of the urethra by the introduction of instruments. I say all cases; for when a stricture has been once made out, does it ever escape bougies? How many cases occur of contraction due to spasm or to temporary thickening of the membrane from inflammation or congestion, which if left alone would speedily clear up, but which are worried into permanent stricture by such mischievous activity? Even when organic or permanent stricture is established, how very seldom does it come under the notice of the surgeon uncomplicated by inflammation or congestion and spasm? and are these conditions to be subdued by the employment of instruments? Is this in accordance with any recognised principle in surgery? Many cases of so-called stricture need no instrumental interference from first to last, and by such means are only made worse; and of those cases in which much may be done at the proper stage by the judicious use of instruments, there are very few indeed which do not require, for some time previously and simultaneously, treatment in the way of rest and other measures to subdue the active mischief, which in ordinary circumstances is almost invariably associated in some degree with passive structural contraction. The story is well known of a physician who, having in consultation discovered pericarditis, consoled his colleague who had overlooked it with the reflection, "My dear fellow, if you had found it out you would have treated it." How far the ordinary treatment would have been bad for the pericarditis I cannot say; but I am sure that stricture of the urethra sometimes suffers very much at the hands of surgery from being found out; and, unfortunately, it has but little chance of escape in the way of being overlooked. In every case, of course, instruments must be passed, and the existing evil is not only apt to be thus aggravated when present, but too often it is nursed into existence.

ON CASES OF BACILLI IN SCARLET FEVER.[1]

BY GEORGE F. CROOKE, M.B. ED.,
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THE bacilli figured in the accompanying woodcut were found in the nasal discharge and in the sero-purulent exudation from the inflammatory lymphatic tissue of the neck in certain cases of scarlet fever.

CASE 1, which I will relate because it represents fairly well the type of the subsequent ones in which bacilli were also found, was that of a previously healthy child, four years of age, admitted last autumn on the third, and dying on the fourteenth, day of the fever. From its commencement the attack was very severe, and the following are some of the chief symptoms that were observed up to its fatal termination:—A persistent high temperature, which underwent a further elevation just before death, reaching 106° F.; great restlessness and delirium; rash characteristic and well out, but of rather darker hue than usual; injection and swelling of fauces, uvula, and tonsils, the latter ulcerated on their inner aspects; much naso-pharyngeal catarrh, with profuse sero-purulent discharge of a rather offensive odour—indeed, there seemed to be a general offensive smell emanating from the patient; the cervical lymphatic glands were considerably involved even at this early stage, both sides of the neck being lumpy, but the right more than the left; vomiting was more or less frequent, there was severe diarrhœa, and the urine was slightly albuminous. One point of clinical interest in the case was the inflammatory condition of the lymphatic glands and tissues of the neck. The swelling gradually increased until it reached that peculiar brawny condition by no means rare in severe cases of scarlet fever. The skin over it was tense and shining, its consistence boggy and semi-elastic, but no fluctuation indicating abscess formation could be felt. I incised the swelling a few days before death, and was struck with the character of the exudation from the wound. It was a turbid, dirty-reddish serum, of offensive odour, and the swelling was seen to be due to an extensive gelatinous infiltration of the tissues of the neck. I at once took some of the exudation on the point of the knife, spread it between two cover-glasses, which I afterwards dried and stained according to Koch's method with gentian violet, mounting them in balsam. My examination of the slides was, I regret to say, only a cursory one, for my attention was occupied with numerous cases of fever in the hospital. But I labelled the slides, and put them away for future examination, which I have made only within the last month or two. On examining the slides with high powers, I found numerous bacilli, as represented in the woodcut; but I will defer their description, and proceed to relate a few other recent cases in which I have found apparently the same organism. For convenience sake I will number them 2, 3, 4, and 5. Clinically all suffered severely from throat symptoms, much nasal catarrh and discharge, considerable swelling of the neck, and constitutional disturbance of a more or less severe form.

CASE 2 died on the thirteenth day of the fever, and the internal condition of the throat, together with the external inflammatory swelling of the neck, necessitated the operation of tracheotomy. She was one whose nasal discharge I examined the day after her admission (third day of disease), and found the bacillus—the long, transverse, curved, and segmented one figured in the woodcut. An offensive odour was noticed about her a day or two after admission; and it was further observed that when the constitutional symptoms ran high the nasal discharge was more profuse, more watery and offensive. I examined some of this fresh watery secretion, and found the bacillus in abundance, but apparently quiescent. I also examined the blood in this case taken from the puncture of a minute venule, and prepared dried specimens of it according to Koch's method. Bacteria are to be seen—viz., isolated cocci (spores?), the bacterium termo, and small short rods (bacilli); but I could not find anything like the fully developed bacillus seen in the nasal discharge. Immediately after death I examined the swelling of the neck, and found the lymphatic glands and the tissue round about welded into a greyish-red succulent-looking mass, but I could find no traces of purulent infiltration or softening. There were red vascular spots which looked as if they might have broken down had the disease gone on longer. I prepared slides of scrapings from this tissue, placing other portions into alcohol for section-cutting. In all the slides I found bacilli, but they were not so abundantly distributed as in the slides prepared from the first case. In one very good slide it was quite numerous in certain foci. I hope shortly to proceed with the more detailed examination of the organs and inflamed glands of this patient.

CASE 3 (sister to Case 2), at present in the hospital, but in a critical condition, gave the bacillus from the nasal discharge, which has been rather profuse the last three or four days.

CASES 4 and 5 are sisters who have had a severe attack with profuse nasal discharge in which the bacillus was found.

In Case 5 the inflammation of the neck went on to

[1] Being the substance of a communication to the Leeds and West Riding Medico-Chirurgical Society, read Feb. 2nd, 1883.

abscess, which I opened, evacuating bloody and thick curdy pus. I examined this, and found the chain micrococcus in abundance but no bacilli.

The bacillus may be described as leptothrix-like filaments, some straight, some curved, and others bent at an angle, varying in length from $\frac{1}{1000}$in. to $\frac{1}{1500}$in., breadth about $\frac{1}{20000}$in.; some show rod segmentation very distinctly, in others small spore-like bodies are visible, and scattered all about the field are numbers of these spores or cocci. I have never yet found a well-marked zoogloea formation peculiar to the micrococcus; but these cocci, or, I think, spores, are scattered mostly singly or in very small groups all over the field. I have not been able to determine whether there is a distinct sheath. What I took, with dry objectives, to be a sheath, I believe now to be due to diffraction lines. With an excellent Zeiss $\frac{1}{8}$ oil immersion, and, still better, with an equally good $\frac{1}{16}$ oil immersion recently forwarded to me by M. Prazmowski, of Paris, I was able, in a few of the bacilli, to make out a faintly stained basis substance of a mucoid character, in which the darkly stained rods and cubical spores were seen to lie. I am not yet prepared, however, to undertake to distinguish this bacillus by its microscopical appearances from every other bacillus, for we know that the various bacilli which of late have been figured and written about—viz., the anthrax bacillus, the bacillus subtilis, leptothrix, the bacillus of pneumo-enteritis of the pig—all resemble each other in general characters, their differences being mainly as to size and character of spores. The bacillus I have described and figured is certainly remarkable for its minuteness, the woodcuts of which were copied from drawings with the camera under a magnifying power of 1100 diameters. As regards length, they are quite correct, but are, if anything, a shade broader than they actually appeared under that magnifying power.

What I do lay stress upon is the apparent microscopical identity of the bacillus found in the nasal discharge of the patients with that found in the lymph from the inflamed glands and tissues of the necks of two of them. It is sufficient to encourage further researches in this direction, and I hope other workers with similar opportunities in the same field will before long be able to record the result of their observations. The only check observations I have as yet been able to make are in connexion with enteric fever and coryza. In the sputum of the former I found a few filaments of leptothrix, which resembles very much the bacillus from the scarlet fever cases, but is certainly larger; in the nasal secretion from typhoid I could get nothing but the ubiquitous micrococcus in zoogloea formation. In coryza I found cocci in the nasal discharge (of the acute stage), but no trace of bacillus. I myself had a pretty acute coryza, and as I am constantly moving about in an atmosphere of germs, I thought I should most likely find the bacillus, and perhaps I ought to feel comforted with the result of my investigations—namely, that my nasal cavity did not appear to be a suitable nidus for the organism to settle in, notwithstanding the inflammatory condition of the mucous membrane, which is generally supposed to be a condition favourable for the implantation of germs.

I may be asked whether I have examined the urine of scarlet fever patients for the organism lately described as being found there; and in answer to that query I should have to reply practically in the negative. Such observations on the urine of fever patients in a fever hospital must be conducted with great precautions, but in future investigations I shall include the examination of the urine, though feeling a little sceptical as to the results to be obtained. I remember a short time ago examining microscopically a specimen of slightly sanguinous and albuminous urine an hour after it was passed by a scarlet fever patient, and I found it literally swarming with active rod-shaped bacteria, much larger, as far as I can remember, than the ones in the drawing, for they were easily discernible with a power of 250 diameters. The only explanation that I could think of was that the urine had been passed into a utensil containing a residuum of stale urine. The nurse, however, assured me it was passed direct into a urine glass which had just previously been scalded out with boiling water and dried. I should state that I had found organisms in the same urine four hours after it was passed, and in this next observation told the nurse to be careful to get a perfectly clean utensil to receive it, and I have no doubt my instructions were carried out. This, then, is the only time I found organisms in the urine of a scarlet fever patient, in the third week, at a time when the pyrexia and constitutional disturbance had subsided; and the explanation of their presence still remains to me a mystery.

Lately, M. L. Bel announced his discovery of the bacillus of measles in the urine of patients suffering from that disease, and about the same time Dr. C. Burger, of Bonn, found in pertussis its special bacillus in the sputum. I have had no opportunity of searching for these organisms as yet, but from the description given of them, while there may be some semblance of the measles bacillus with those I have obtained from scarlet fever, yet the elliptical shape of the whooping-cough bacillus is sufficient to distinguish it. With regard to the nasal discharge in scarlet fever patients, it seems, from a clinical note upon a case communicated to the *British Medical Journal* of Feb. 3rd, by Dr. Tinley of Whitby, to possess considerable infective properties. It appears from his very interesting communication that a boy suffering from scarlet fever, and treated in a fever hospital, was discharged apparently quite well and free from infectiousness after eight weeks' isolation. About a week after returning home, he appeared to have a distinct relapse, and it was noticed that, in addition to a fresh sore-throat, ulceration was going on in the nose. Within three days a brother and a sister sickened and developed the fever, and the source of their infection admits of no other explanation than from their brother, who was discharged as convalescent from the hospital, but evidently with mischief still going on in the nasal cavities. It would indeed have been interesting to have examined the nasal discharge from this lad for the bacilli I have described.

I have to thank Dr. Jacob, the visiting physician to the hospital, for his courtesy in placing his cases at my disposal, and also my friend Mr. James Abbott, of this town, whose practical knowledge of microscopy was of great assistance to me when looking over the slides with higher powers.

P.S.—I should mention that the staining fluid used was quite fresh and carefully examined for organisms with negative results, and that similar precautions were taken in using clean slides and cover-glasses.

Leeds.

A GROUP OF EIGHT CASES OF CANCER OF THE RECTUM.

SUCCESSFUL COLOTOMY IN FIVE; SUCCESSFUL PARTIAL EXCISION OF THE RECTUM IN ONE; TWO NOT OPERATED ON; REMARKS.

By ARTHUR E. BARKER, F.R.C.S. ENG.,
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(Concluded from p. 314.)

CASE 5.—R. M——, aged thirty-four, admitted under my care on July 28th, 1882. He had been a very strong man, but when first seen, five weeks before admission, he had an expression of much suffering, standing with his back bowed down and his hands resting on his knees, the latter slightly flexed, complaining of intense gnawing pain down his legs as low as the ankles. His face was pale and haggard from want of sleep for a long time. His family history was good, both parents being alive and aged seventy-two, and hereditary cancer distinctively negatived. About five months before melæna and pain on defecation were noticed; his motions, which often reached twenty a day, consisting of almost pure blood at times. When first seen before admission, I found a new growth encircling the bowel just within reach of the finger, its upper margin being only accessible during anæsthesia; it appeared about an inch deep, was rugged, ulcerated, bled slightly, and was extremely painful to the touch. The mass seemed generally movable, but much less so behind, where it appeared more or less fixed to the sacrum. Other efforts to give relief having failed, the patient became anxious for any operation which would afford him relief from his intolerable suffering. As he was young, generally healthy, and the growth had only appeared comparatively recently, and was still limited, I hoped to be able to excise it completely as in Case 2.[1] But there was some doubt in my mind whether it could be reached as easily, and also whether it was not to some extent extend-

[1] Vide Brit. Med. Journ., Jan. 6th, 1883.

ing towards the sacrum, and fixed there. I determined then to attempt excision, at all events as far as the preliminary incision in the middle line of the anus to the coccyx, and if the growth could be reached remove it. This was done on Aug. 10th, and in the wide opening secured by the first incision, it was found that the growth was too much fixed behind, and could therefore be drawn so little within reach that it would not be safe to go farther. No serious trouble followed this exploration, and on Aug. 23rd I performed colotomy precisely as in the other cases, except that more care was taken to unite the mucous membrane all round the skin wound with extra stitches of fine silk, in order to secure more complete union by first intention. All went well from this onwards. On the fifth day the stitches were removed, three from the skin and seven from the mucous membrane. The whole wound, except about a quarter of a inch at the posterior angle next the colon, healed by first intention. On and after the sixth day motions passed by the new anus. With the exception of a little diarrhœa there is nothing to note until the patient left for the Convalescent Home, except that a little fæces still passed occasionally per anum. He was greatly relieved by the operation, and looked well.

CASE 6.—Mrs. J——, aged sixty-two, admitted under my care August 17th, 1882, a fairly healthy woman, with a good family history distinctly negativing hereditary cancerous taint. About two years ago melæna and frequent action of the bowels were first noticed, but there was no pain or discomfort. One year ago she began to suffer from "aching" pain in the rectum. The bowels were moved at that time at least eight times a day, and never without blood. For the last six months the discomfort has much increased, especially after each motion, but also on sitting down, when the pain is most severe both at the anus and down the thighs. In the rectum there is now a large mass of new growth round the gut, about two inches from the anus, extending beyond the reach of the finger; it is nodular and only slightly ulcerated. The vagina is only separated from the mass by a very thin layer of healthy tissue. On August 23rd I performed colotomy as in the last case. On passing the needles through the colon, and making a cautious cut between the stitches for about half an inch I found that one of the latter had wounded the peritoneum and allowed the inflated air to pass into the abdomen, and also that my incision in the wall of the bowel had wounded the peritoneum without opening the latter. I therefore sponged the stitches and wound afresh with carbolic solution and united the peritoneal edges with a fine continuous carbolised silk suture. Then drawing out the first stitches I passed fresh ones across the wall of the gut, but this time only through its muscular coat so as not to enter the bowel. These were now secured to the skin, and the operation wound was united in the usual way. Everything was thus left until the sixth day without opening the gut. By this time the peritoneal surfaces were soundly united; the rest of the operation wound had healed by first intention without a drop of pus, and I found the muscular wall of the gut glued firmly in the opening by semi-solid lymph. The gut was now opened with a scalpel and the mucous membrane stitched to the skin in the usual way. Nothing could have been more satisfactory than the whole course of this convalescence in spite of the wound of the peritoneum. There was not a bad symptom and no suppuration, and I regard it as the best of the series. From the seventh day onward the new anus acted well, a trace of fæces passing occasionally per anum still. Before the patient left for the Convalescent Home a bougie was passed into the wound a few times, as it inclined to shrink.

CASES 7 and 8.—Of these I need say little in addition to the general notes of the group given above. They were males aged sixty-eight and seventy-seven respectively, and their condition so far should not justify the performance of colotomy. The last, a private case, I still hear about frequently.

A few notes as to the subsequent history of the cases operated on will serve to complete the series up to date. Case 1 I cannot trace after her discharge from the hospital. Case 2 was alive and in excellent health when I last saw him, sixteen months after the operation, without a trace of recurrence. Case 3 began to improve at once after operation, and on his return from Eastbourne looked strong and healthy. He has since had occasional trouble in regulating his bowels, as he is inclined to constipation. The flank opening is inclined to shrink, and I have been obliged twice to dilate after incision of the edge, the last occasion being about a week ago, or just six months after operation. This was necessary, as without a very free lumbar opening in his case some of the fæces tended to work into the rectum, and set up the old pain. The patient had, however, been able to return to his work as College porter before this, and got about without great discomfort for a time, until this shrinking, combined with constipation from other causes, gave rise to trouble. I have no doubt that this difficulty will shortly be overcome.[2] Case 4 was much relieved by operation. He returned for examination from time to time and professed himself greatly improved, and he had manifestly grown stronger and gained flesh as he got about out of doors. In this instance there was a tendency to prolapse of the colon for a couple of inches, but it was easily kept up by Mr. Bryant's rubber-pad, modified slightly by the author to meet this particular case. When last seen by the writer in December he had the appearance of a fairly healthy old man, and was able to get about in the fresh air without discomfort. Within the last few days I have learned from his son that just before Christmas last he had a severe attack of his usual "winter cough," and died on Dec. 26th, 1882. The diagnosis made by his medical attendant as to the cause of death was "primary bronchitis." I regret that as I was out of town at Christmas an autopsy was not obtained, which would have shown the state of the bowel and the new growth. Case 5 suffered much and almost constant pain in the rectum after the first couple of months, though his general health and appearance were much improved. It seemed from the first as though in this case some of the lumbar nerves might be implicated in this growth from the character of the pain. Later, although the new anus acted most satisfactorily according to his own account, and the rubber plug and pad saved him from any unpleasantness during the day, still the old pain in the back and thighs came on again and again with much severity, and required morphia. But, as contrasted with his state beforehand, he was much improved for some months by operation. But before leaving town for a short time at Christmas I went to see him at his home and found that generalisation of the new growth had plainly commenced. He had a nodule as big as a pigeon's egg in the middle of his forehead, and probably deposits in his lungs. When I last saw him, a month ago, the frontal nodule was much enlarged, and his liver was enormously increased in size also. He had then marked cancerous marasums, and died two days later (Jan. 29th). The colotomy wound had acted well up to the end. Case 6 is, perhaps, the best result of the five colotomies. For four months after operation she had only a trace of dull pain in the rectum on sitting down. Her bowels acted, she stated, regularly through the loin once or twice a day, and in the intervals the side remained quite clean and comfortable. Every time she called at the hospital it was thus. She was cheerful and contented, and said she had gained flesh; and, indeed, she looked remarkably well, and not in the least troubled by the lumbar opening. Within the last week or so she has again come up to be examined, and she tells me that quite lately the gnawing pain in the rectum has increased much, and has called for the use of morphia. The consequent constipation has caused some difficulty in evacuation by the lumbar opening, which is of moderate size, and some motions have therefore found their way into the rectum. This, I have no doubt, will be easily rectified. In the meantime she goes about with no discomfort from her side, and looks still fairly well. Cases 7 and 8 have not been seen lately; but of the latter I have learned that he has commenced to pass blood from the rectum in considerable quantity. All of the last four colotomy cases wore Mr. Bryant's rubber plug and pad for a time. In Cases 3 and 5 it acted well when modified; in Cases 2 and 6 it was discarded after a time although altered many times to make it fit.

This group of cases appears to me to offer data for help in the selection of cases for operation, and then for the choice of the particular method of operation. Only one out of eight, it will be seen, was suitable for excision, and only five for colotomy. It will be noted that all the operations were followed by relief, the excision by permanent cure, it may now be hoped. Case 1 I could not trace. Case 2 was alive and well, with no recurrence, sixteen months after excision. Case 3 is alive and in very good general health still, six months after colotomy. Case 4 lived for five months after operation in fair health and able to go about, and then died of bronchitis. Case 5 was relieved of much suffering for at least

[2] Since writing the above all his trouble from constipation, &c., has been relieved by the last dilatation, and he is now comfortable.

two or three months, and his general health was very much improved until generalisation set in. He lived over five months after operation. Case 6 is still alive and well, nearly six months after the lumbar anus was made. She goes about still without discomfort from the latter, and though she is now beginning again to have pain in the growth in the rectum, her condition generally is good.

I cannot help thinking that, though there are undoubtedly many cases of cancer of the rectum for which colotomy is not called for at any time, still there are many cases in which it would give great relief in which it is too long deferred, and its full benefits are therefore not enjoyed by the patient. Finally, there must be many cases suitable for excision if placed in our hands *early enough*.

Harley-street, W.

REPORT UPON

AN OUTBREAK OF TYPHOID FEVER AT NEWTON-HEATH, MANCHESTER.

BY HENRY TOMKINS, M.D., B.Sc., &c.,
MEDICAL OFFICER TO MONSALL FEVER HOSPITAL.

TOWARDS the latter end of last year it came to the notice of the health authorities of the township of Newton-heath, a populous suburb on the northern side of Manchester, that cases of typhoid fever were occurring in their district much in excess of what was ordinarily to be met with, and as no sufficient cause was discovered for the outbreak, and as there was also some doubt whether all the cases met with were really cases of typhoid fever, I was requested by the authorities to make an investigation thereof, and to discover if possible to what the outbreak was due. My inquiries extended from Nov. 24th to Dec. 12th, up to which time I was able to establish the existence or pre-existence of about sixty cases of undoubted typhoid fever, so that there was no doubt about the presence of what may be called a small epidemic of that disease. The next and more important step was to endeavour to ascertain the origin of this outbreak. Up to the third week in October the district had been free from typhoid, during the next six or seven weeks sixty cases had arisen. The township of Newton-heath extends some two and a half miles from south-west to north-east, but the bulk of the cases were situate in a comparatively circumscribed area, within a radius of some two hundred and fifty to three hundred yards; the number of cases occurring beyond this in other parts of the township did not exceed what may be ordinarily looked for at this season of the year in all large centres of population, or what were occurring at the same time in other parts of Manchester and Salford. The problem therefore to be solved was, To what influence had those residing in the above area (and which for convenience may be called "the infected area") been subjected to which those distant therefrom had not been so subjected? Attention was first turned to the water-supply, but as this is supplied from the Manchester mains and was at the same time being supplied to other districts from the same main, where no typhoid had attracted attention, this could not be suspected of having played any part in the outbreak. The milk-supply was next considered, and to this especial attention was paid, as it had been thought highly probable by some residing within the district that this might be the origin of the whole mischief. The facts ascertained in connexion herewith were as follows. In the thirty-three houses in which typhoid was present the milk had been obtained from twelve different sources, one milkman upon whom suspicion fell having supplied twelve houses entirely and three partially, but some of the most severe cases were in those houses not supplied by him; and, further, among his customers outside the above area typhoid did not prevail. Inquiry also at the farm whence the milk was obtained in no wise served to show that there was any reason to suspect that the milk was contaminated. This therefore afforded no satisfactory explanation, nor gave the desired clue. The sanitary arrangements of the district in question, speaking generally, were good. The houses are comparatively new. The excreta, &c., are disposed of in the manner known in Manchester as the pail system, and, together with the ashes and other refuse, are removed weekly. In almost every instance complete disconnexion between the houses and the sewers had been effected—in fact, the entire sanitary surroundings were much better than in other and older parts of the township where typhoid was not prevalent. From the officials of the local board I elicited the following facts. About the middle of September, owing to some suspected defects in a sewer running down a main street situate in this locality, known as Ten Acres-lane, an inspection was made, and it was discovered that the level of this large sewer, eighteen inches in diameter, was defective and altogether at fault, that it could not empty itself, and was found to be more than half full of stagnant decomposing sewage deposit, that it was unventilated, and was choking up and interfering with the proper flow down the branch sewers from the adjacent streets which ran into it. To remedy this it was opened throughout its whole length, taken up, and relaid at a lower level, with sufficient fall, the final closing not taking place until the first week in November, or about the time when the first cases were brought under the notice of the board, and from which time they continued for the next few weeks to increase rapidly.

From careful inquiry I was able to ascertain with tolerable precision that the first case to come under observation occurred about the second week in October. It is pretty well agreed that the average period of incubation in typhoid fever is about three weeks. Now what do we find here? We have the opening of a defective sewer and the disturbance of a large quantity of stagnant sewage matter, in a previously healthy locality, followed within two or three weeks by a series of cases of typhoid, the earliest of which broke out in the street in which the sewer was laid, some of these being among the most severe cases met with during the outbreak, and amongst which the earliest fatal cases occurred, and during the three or four weeks following the final closure of this sewer fresh cases continued to arise, and not until that period had elapsed was there any marked decrease in the number of cases met with. Another point noted was that a larger number of cases lay to the north-east of this sewer than in any other direction; the smaller side streets running off from the main street (Ten Acres-lane) on either side in a north-easterly direction on the one hand and south-west on the other. It was shown by meteorological observations taken in the township that in the fifty-seven days during which the sewer was open the direction of the wind was, in forty-four of those days, from the west or south-west; this would carry the infected air in that direction where the greater number of cases were found. Not that I consider it necessary to lay much stress upon this point, but we know so little as to the properties or powers of life of the contagium of this disease, that we are not justified in saying that air laden with the poison cannot be carried even greater distances than would appear probable in this case without having its infective properties destroyed.

In THE LANCET of February 10th, 1883, notice is made of a report of an outbreak of diphtheria in the Holbeach Rural district, where the possibility of conveyance of infection by wind currents is considered. Other epidemic diseases have long been thought to travel considerable distances by the medium of wind and air currents. But no doubt most of the patients who suffered during this outbreak, living in the immediate neighbourhood, would have come into close proximity to this open sewer some time during the eight weeks it was under repair, so that the wind theory is not necessary to account for them. In four houses, containing six cases, situate some considerable distance beyond the limits of the "infected area," the patients had all been for a greater or less length of time in the immediate neighbourhood of the open sewer. Two of these had lived in the street in which the sewer was open, two had attended school for several hours daily within the infected area, one had visited at the house of a friend there who lay ill with typhoid, and another had passed daily to and fro by the open sewer.

Taking into consideration the whole of the above evidence, there appears to be every justification for connecting the outbreak with the disturbance of this stagnant, unventilated sewer, at a period of the year too when typhoid is most prone to prevail; and although there is nothing new in this conclusion, other outbreaks of a precisely similar nature having been met with by other observers, it yet serves once more to show the danger to be apprehended, and guarded against, when defective drains, especially if containing stagnant decomposing matter, are to be opened up and disturbed.

Manchester.

CASE OF TRIPLE BIRTH FOLLOWED BY PUERPERAL ECLAMPSIA.

BY PERCY BOULTON, M.D., M.R.C.P. LOND.,
PHYSICIAN TO THE SAMARITAN FREE AND QUEEN CHARLOTTE'S HOSPITALS.

ON Sept. 21st I was asked to see A. O——, who had been delivered the day previously of triplets, and was in strong convulsions. Excepting its plurality, the labour had been normal. The large single placenta had come away naturally, and the uterus contracted well without any excessive hæmorrhage. The patient was with difficulty kept in bed during the fits by two women in attendance, and in spite of a clothes-peg, which had been used as a gag, she had bitten her tongue badly. She was pale, unconscious, foaming at the mouth, the pupils were dilated, the skin cool, and the legs much swollen. I was told that before the fits she had complained of severe headache, and that she had passed very little urine. In addition to the increased arterial tension during pregnancy, the enormous size of the uterus during triple pregnancy causes pressure on the large abdominal vessels, on the bladder, thereby diminishing its capacity, and to some extent on the ureters, preventing free escape of urine into the bladder—all tending to renal congestion and uræmic eclampsia. This patient, however, had no symptoms of convulsions till after confinement, when the pre-existing pressure had been removed, and therefore it was a question whether the fits were uræmic or not. The swollen extremities showed that although direct pressure had been removed, the circulation had not recovered itself; and it is probable that the immediate result of delivery is to add to the troubles of renal incompetence, since diminished centrifugal flow towards the uterus would increase pressure on the renal arteries, and the products of involution charge the circulation with matter which would cause irritation and contraction of arterioles, and so further increase arterial tension. The cold pale surface and dilated pupils pointed to superficial and cerebral anæmia from this cause, while the kidneys were in a state of active hyperæmia and the urine highly albuminous.

The treatment which I ordered was that the loins should be constantly poulticed, and that she should take directly a strong jalap purge, and twenty grains of bromide of potassium every three hours, the diet being restricted to milk. When I next saw her I was prepared to give a hypodermic injection of pilocarpine, which is a valuable remedy in such cases, causing profuse perspiration, with excessive excretion of urea. The girl, however, was so much better that she continued the former treatment with the very best results, and is now quite convalescent. Theoretically nitro-glycerine, or amyl nitrite, so valuable in exalted reflexes, should be of service in such a case. In my experience they cause dilatation of the contracted arterioles, and have decidedly a temporary, but no permanent, good effect.

Seymour-street, W.

ON RETRACTION OF THE FLAP AFTER SYME'S AMPUTATION.

BY BENNETT MAY, B.S.

AMONG the morbid conditions of stumps there is one incidentally alluded to by Mr. Savory in his "Notes on Surgery," which appeared in THE LANCET of Feb. 3rd. It is that of retraction of the heel flap after Syme's amputation. Although not generally recognised or looked for, it is, as he points out, a contingency to be provided against in certain cases, of which an example is now under my care at the Queen's Hospital. The patient is a young man on whom I performed a double amputation for a railway smash eighteen months ago, removing one limb below the knee and the other at the ankle. He made a very quick recovery, and for some time was very comfortable, but a few weeks ago he came to show me his Syme's stump, on which he was no longer able to bear any weight owing to the pain this gave him. I found that he was walking on the cicatrix, where two large painful corns had developed, and that the heel flap, instead of receiving all the pressure, was retracted quite to the back of the leg, the integuments above it being thrown into several transverse folds from their laxity. It had evidently been drawn into this position by the muscles of the calf. Fortunately a division of the tendo Achillis has completely liberated the flap, and has enabled me to readjust it and replace it in normal position with complete relief to his troubles. I explain the occurrence in this case—1st, by the fact, that the operation being a primary one, the muscles of the calf were caught in a state of full development and activity, and not attenuated by long disuse; and 2nd, that owing to the rapid recovery which took place the tendo Achillis at a very early period attached itself to the heel flap—obviously a disadvantage, and one which I should endeavour to prevent in a future primary amputation by severing the tendon some distance above its insertion into the os calcis, or by removing an inch of it after division. The operation was originally performed almost precisely on the lines recommended by Mr. Savory, at least in the one particular of carrying the incision right across the sole and not backwards.

Birmingham.

ON A PROLONGED CASE OF TETANUS.

UNDER THE CARE OF
DR. J. ROBINSON and MR. STENSON HOOKER.
Reported by the latter.

W. H——, aged fourteen, on May 31st last, whilst bathing, received an incised wound on the ball of the great toe by treading on a piece of broken bottle; all went well until June 9th, when he complained of a "cold in the jaw," with stiffness of the muscles of the neck and between the shoulders; the wound was now healing nicely.—June 10th: The jaw is all but closed, and the muscles of the abdomen, back, and limbs contract still more strongly when touched. The urine is loaded with lithates; bowels rather confined. He takes liquid nourishment well, this being accomplished by suction, the teat of an infant's feeding bottle being squeezed between the teeth. Temperature 101·6°; pulse regular, 100. Given twenty grains of bromide of potassium every four hours.—11th: There is general clonic spasm of all the voluntary muscles with intense pain, at times the condition is that known as opisthotonos. Given a scruple of chloral hydrate. Temperature 102·2°; pulse 160.—12th: Pain and muscular contraction still intense. Chloroform was administered, which relaxed the muscles and gave him sleep, but immediately on awakening the rigidity recurred. This extreme state continued. Chloroform being administered each day until the 23rd, there being no cessation from spasm except when under the influence either of this drug or of opiates.—20th: Continues to take nourishment well; this consisted of milk, soup, and beef-tea. Temperature 100·2°; pulse 100. The bromide was evidently useless, and was therefore discontinued.—23rd: Five drops of tincture of Calabar bean were given every two hours; the dose was increased gradually day by day. Wound healed. Pulse 116; temperature 100·2°.—26th: There is some loss of vision, which is hazy; he cannot distinguish objects further than a yard off. Pulse 124; temperature 102·4°. Is now taking twenty drops of the drug every four hours.—27th: There is complete loss of vision; pupils are normal. He is slightly delirious, and complains of tingling in both feet. There is no natural relaxation of the muscles. Pulse rather smaller, regular, 120; temperature 102°.—30th: The spasms are a little less violent and less frequent in the muscles of the trunk. He is now taking thirty drops for each dose. The vision has returned to some extent. Urine copious; bowels rather relaxed. Takes nourishment well. Pulse 94; temperature 100°.

July 3rd: The spasms are not so violent, and are confined to the lower extremities. He is now taking sixty-five drops every four hours.—4th: The masseters relax slightly, and there is a constant desire to yawn.—9th: Patient can now flex both arms, also the leg upon the thigh. Temperature 98·8°; pulse 96.

There was a slow improvement from this time, the intervals between the spasms becoming more and more prolonged. On the 12th he could eat solid food for the first time since the attack; and on the 31st he could eat and talk fairly well; there was no spasm, but the legs were still somewhat rigid. On Aug. 5th all rigidity had disappeared, and the Calabar bean was omitted. The patient was up on the 7th and complained only of general stiffness and debility,

and from this date he gradually recovered and now enjoys perfect health.

Remarks.—The interest in this case lies in its exceptional prolongation. Twenty days passed before the slightest cessation of spasm took place, twenty-four before the muscles even commenced to relax, while fifty days passed before there was absolute freedom from spasm and rigidity. This I believe to be the longest case on record, and the question which suggests itself is, Did the drug, Calabar bean, exert any influence for good in this case? It will be seen that it produced, at least, physiological effects which are unusual, if not unique, the patient being for three days totally blind.

Midhurst.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

LARGE CERVICAL LYMPHADENOMA; EXCISION; RAPID RECOVERY.

(Under the care of Mr. R. CLEMENT LUCAS.)

FOR the report of this case we are indebted to Mr. J. D. Hughes.

C. C——, a woman, aged thirty-eight, was admitted into Martha ward on Jan. 8th, 1883, when the following notes were taken:—Her parents are healthy, and both over sixty years of age. She is married, and has five children. There is no tendency to hereditary disease. She has generally had fair health; but during the last seven years she has been subject to rheumatic attacks of short duration, which have not necessitated her lying in bed. These were chiefly rheumatic pains in the shoulders and head accompanied by nervous headaches.

About fifteen months before admission she first noticed a lump about the size of a walnut, below the left ear and in front of the sterno-mastoid muscle. It was movable and not tender on pressure. It caused her little inconvenience or pain. She applied iodine without benefit and some other applications. Internally she took medicines and cod-liver oil, but without reducing the swelling. She then, finding the swelling gradually increasing, sought advice at the Charing-cross Hospital, with a view of operation, where she remained three weeks, at the end of which time she was discharged, and, it is stated, was told nothing more could be done for her. This was last autumn, since which time the tumour has doubled in size. The patient is a somewhat delicate-looking person of fair complexion, but not very anæmic or emaciated. Her teeth are much decayed, appetite bad, and breath offensive. There is a large mass projecting from beneath and behind the left sterno-mastoid, extending from the lobule of the ear rather more than half way down the muscle. The tumour measured from above downwards five inches, and from before backwards four inches. It is distinctly lobulated, firm, almost hard, and somewhat tender. There is a lobule in front of the sterno-mastoid, beneath the jaw, about one inch by one inch, and a larger one behind about two inches by an inch and a half. The different lobules are joined together with the exception of one about the size of a walnut situated in the posterior triangle above the left clavicle. The tumour does not swell more one day than another, but of late has been increasing rapidly. There is no enlargement of the lymphatic glands in the axillæ or groins, and the spleen and liver are not enlarged. An examination of the blood was made under the microscope, and some increase of white corpuscles was observed, fourteen white corpuscles being found in a field which with normal blood only showed ten. Mr. Lucas determined to postpone operating till after her menstrual period.

Jan. 16th: The patient being in a better state of health than when admitted, and the menstrual period having passed, Mr. Lucas decided on operating. Chloroform was administered, and the carbolic spray was employed. An incision five inches in length was made along the outer border of the sterno-mastoid, commencing behind the lobule of the ear. A second incision, two inches and a half in length, was then made at right angles to the former, in a direction downwards and backwards. The platysma was divided and the skin retracted by hooks. The small occipital, great auricular, and spinal accessory nerves were divided over the tumour, which was dissected out from under the sterno-mastoid with the aid of the handle of the scalpel and a blunt dissector. There appeared to be no proper capsule to the growth, which was raised with great care from the sheath of the carotid vessels, to which it was adherent. The occipital artery was injured, then seized by two pairs of torsion-forceps, divided, and its ends twisted. The carotid artery and internal jugular vein could now be distinctly seen at the bottom of the wound. The real difficulty which presented itself was how to remove the glands in the submaxillary region without making a fresh incision or dividing the sterno-mastoid muscle. The muscle was well raised by means of a large hook, and the skin in front was then pushed back and invaginated, so as to thrust the glands under the muscle. They were then separated from their attachments and removed. At this time the patient's pulse became very feeble and her breathing shallow, so that it was necessary to finish the operation with rapidity. After the heart had been stimulated by the subcutaneous injection of brandy, Mr. Lucas made another incision, two inches and a half long, just above the clavicle, and having divided the platysma, turned out the last gland, which was about the size of a walnut. The wound was closed with wire sutures, and a drainage-tube passed under the sterno-mastoid into the submaxillary region. A small drainage-tube was also inserted into the wound above the clavicle. The operation lasted an hour and ten minutes.—17th: The patient has suffered a good deal from shock and was ordered brandy during the night. Pulse feeble and compressible. Temperature 97°. She vomited once in the night. The wound was dressed and looked well.—18th: Patient complains of headache and slight pain in the neck. She could not sleep, so was ordered a subcutaneous injection of a quarter of a grain of morphia last night.—19th: She complains of less headache and appears well, though slightly pale and weary-looking. She has a dry throat and slightly furred tongue. Temperature 99°; pulse full, slow, and regular.—20th: Her bowels being constipated, she was given ten grains of colocynth and hyoscyamus pill. Three sutures were taken out to-day and the drainage-tube removed; the incisions have united primarily; there is no discharge.—22nd: Progressing favourably. Three more sutures were removed. She has a feeling of numbness in her ear.—25th: The remainder of the sutures were removed to-day. There is no discharge. Temperature, pulse, and respiration normal. Has a good appetite. She was ordered quinine and iron in a mixture. Dry dressings are now used over the upper part of the neck, and carbolised spray and gauze over the small wound over the clavicle. The patient has lost all headache and nausea.—30th: Bandages have been dispensed with and the patient gets up daily. There is no discharge, the edges of the wound being entirely healed throughout the whole extent by primary union.

Feb. 3rd: All that is now noticeable is a slight superficial scar where the incisions were made on the side of the neck, and this being behind the edge of the sterno-mastoid it appears as a natural crease. She has no pain in the neck. Her appetite is good, and she has regained colour.—5th: The patient left the hospital well.

The tumour removed consisted of a glandular mass six inches in length, and varying in diameter from two inches to two and a half. It was firm and lobulated, the different lobules being strung together. In no part did it show any tendency to caseation or suppuration, and appeared to consist of hypertrophied gland tissue. Some glands were separately removed. The patient's temperature after the operation never once reached 100°.

NEWCASTLE-ON-TYNE INFIRMARY.

STRANGULATED FEMORAL HERNIA; OVARIAN CYST; OPERATION; DEATH.

(Under the care of Mr. PAGE.)

ON Friday, November 10th, a woman, aged sixty-two years, was admitted into the infirmary suffering from pain in the abdomen and vomiting. She said she had been confined to the house for a month in consequence of severe pain in

her bowels and constipation. A few days before admission she began to vomit. On the 7th or 8th of November strangulated femoral hernia was diagnosed and preparations made to perform herniotomy, but at the last moment the patient refused her consent.

Having become worse, she was admitted to the infirmary on Nov. 10th. She was then evidently very ill. Her pulse was quick and weak, and her tongue moist, in appearance not unlike olive-coloured plush. The abdomen was somewhat distended, tender to the touch, resonant on percussion, and no fluctuation could be detected in it. There was a right femoral hernia, which could not be reduced. It was dull on percussion, not in the least tender, and there was not the slightest trace of any redness of the skin over it. Mr. Page concluded the hernia was not the cause of the peritonitis from which the patient was undoubtedly suffering, but he failed to find any other explanation of her condition. Large warm-water enemata were ordered and one grain of opium was given by the mouth. In the morning she was still vomiting; she had slept, and fæcal matter was seen in some of the returned enemata. As her condition was now one of great danger, a consultation was held and a thorough examination made under the influence of chloroform. The result was a unanimous opinion that the hernia was not the cause of the woman's condition. It was also agreed there was a fulness, not a localised, but a general fulness, of the belly, the precise nature of which the tympanitic condition of the bowels made it very difficult to determine, and which was not made out. Mr. Page wished to cut down upon the hernia and, failing to find any explanation there, to open and explore the abdomen; he was averse to cutting down upon the hernia without being prepared to proceed further if he found no strangulation. The injections were ordered to be continued, and one grain of opium with a quarter of a grain of extract of belladonna to be given every four hours. At night the patient was worse, the sickness continued, the injections returned without any fæcal matter, and Dr. Arnison concurred in the view that it would not be rash to cut down upon the hernia, and finding no explanation there to seek for it in the abdomen. The patient, however, refused her consent, and continued to do so until the afternoon of the 13th. Her condition then was one of great prostration. She was vomiting every ten or fifteen minutes, no flatus had passed since the 11th, and the end did not seem to be far distant. Mr. Page cut down upon the hernia and found an enormously thickened sac, almost incorporated with which was the gland usually found in the crural ring. The sac was opened; it contained a few drops of clear fluid only. On passing the finger into the belly it was determined there was no other hernia. The abdomen was then opened, and immediately there welled out from among the distended and intensely inflamed intestines material about which there could be no mistake—the thick tenacious semi-fluid matter commonly found in an ovarian cyst. As quickly as possible the belly was cleared, and then, just emerging from the brim of the pelvis, was found an entire ovarian cyst. It was tapped and removed. The patient rallied slowly, but so thoroughly, that on Thursday, the 16th, great hopes were entertained that she might recover. Early on the morning of the 17th, however, the temperature suddenly rose; she began to sink, and died at 4.30 P.M., just ninety-seven hours after the operation. Permission to make a post-mortem examination was refused, so that the precise cause of death is a matter of conjecture.

Remarks by MR. PAGE.—The circumstances upon which I mainly relied, as evidence that the hernia was not the cause of the symptoms, were the entire absence of tenderness and of any redness of the skin over the hernia. The acute symptoms had existed for probably a week before the patient was operated upon, and even at the time of operation there was no tenderness or redness present. I felt the responsibility of not cutting down upon the hernia, and the more so as I could not advance any definite opinion as to the cause of the serious condition of the woman. Strangulated hernia would have accounted for such a condition as we found her in; but, supposing there was no strangulation, what was the connexion between the fulness of the belly and her condition? Possibly a burst ovarian cyst ought to have occurred to us as an explanation, but it did not, and perhaps I may be allowed to state here that it was most difficult to obtain any information about the history of the case previous to admission of the woman into the infirmary. There may have been some injury, bursting the cyst, which the patient wished to conceal. The fact that this aged woman survived for ninety-seven hours two serious operations, performed under circumstances so very unfavourable, is instructive, and should encourage us in even desperate cases to give the patient the chance of recovery surgical interference can afford.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

The Etiology of Scurvy.—Case of Scurvy with Dilatation of the Heart and Retinal Hæmorrhage.

THE ordinary meeting of this Society was held on February 27th, Mr. John Marshall, F.R.S., President, in the chair. Two papers were read dealing with the subject of scurvy. Mr. Neale, late Medical Officer to the *Eira* Expedition, contributed the first paper, which was listened to with great attention, and excited a very prolonged and interesting debate, which was shared in by Sir W. Smart, Dr. John Rae, Dr. De Chaumont, Dr. Colan, Dr. Donnett, and others. The second paper consisted in the record of a case of scurvy associated with dilatation of the heart and retinal hæmorrhages, conditions attributed by the author, Dr. Hale White, to the anæmia present in the disease. At the close of the meeting, the President stated that further opportunity would be offered at an early meeting for the discussion of the questions raised by Dr. Hale White, as other papers on the pathology of scurvy were to be read before the Society.

Notes on some points in the Etiology of Scurvy, by Mr. W. H. NEALE. The object of the paper was to discuss the etiology of scurvy, and to consider whether the experience of the late *Eira* Arctic Expedition could throw any light on the question as to how scurvy may best be prevented during an arctic winter. The recognised predisposing causes of scurvy were bad hygienic conditions, long confinement, want of exercise, monotony, anxiety, exposure to cold and fatigue, to which might be added, in the opinion of the author, the use of an inferior quality of meat, whether preserved or not. The exciting causes were the insufficient supply of fresh, or of good preserved, vegetables, and, in default of vegetables, the want of lime-juice. Anæmia was one of the first symptoms of scurvy, and it was not difficult to account for its production if it were remembered that the life led by a body of men shut up in a ship for at least six months must lead to a deterioration of the quality of the blood. Though every attempt was made during the last Government expedition to provide for good ventilation, the general opinion was that the results were not satisfactory. With regard to the action of an inefficient quantity of vegetable food, statistics were very contradictory. The author proceeded to compare the dietary of the two most recent English expeditions to the arctic regions. In the expedition under Sir George Nares the hygienic conditions, though not entirely satisfactory, were so good that the outbreak of scurvy could not be attributed to any defect in them, and compared favourably with those under which the crew of the *Eira* passed their winter. With regard to diet and ventilation, however, there were distinct differences in the two cases. From a consideration of the dietary, it was evident that the absence of scurvy in the *Eira* Expedition could not be ascribed to the employment of a larger total weight of food, and in particular not to the use of a larger quantity of vegetable food, nor to lime-juice, which was not used for a whole year. No case of scurvy occurred among the crew of the *Eira*. But the diet of the two expeditions differed widely in the kind of meat used; in the Government expedition the crews lived almost entirely on preserved meats, while the crew of the *Eira* lived exclusively on fresh meat from animals killed on the spot. All flesh obtained in the arctic regions can be kept in a state, though frozen, chemically like that in which it was when the animal was killed, and must therefore supply to the body those ingredients which are known to be diminished in scurvy far more readily and abundantly than can preserved meats. The importance of using the blood as well as the flesh was much insisted on. Blood obtained from the jugular vein immediately after death becomes frozen solid before any acid fermentation takes place, and in

it exist all the components of healthy blood, some of which are deficient in scurvy. The author made the following suggestions with regard to the conduct of future arctic expeditions:—1. That the crews should spend the winter in huts rather than on board ship. 2. That the albuminoid food should be abundant, and consist as much as possible of the flesh of recently killed animals. 3. That the meat should be cooked in the form of stews or hashes, to which the blood of the animals should be added. 4. That preserved vegetables should be mixed with every meal, to aid the digestion of the meat, but not because they possess in themselves any special, exclusive, antiscorbutic properties. 5. That lime-juice may be dispensed with if fresh meat can be obtained.

Dr. W. HALE WHITE then read a paper on a case of Scurvy with Dilatation of the Heart and Retinal Hæmorrhages. Out of about twenty cases which were examined at the *Dreadnought* Hospital, only one presented retinal hæmorrhages, and that fell under the author's care. The patient was admitted on Nov. 13th, 1882. He had left Calcutta four and a half months ago, and whilst there had had dysentery. On admission he was very sallow, and his was evidently a severe case; there was swelling of the gums and the usual bruise-like swellings about the body. The apex beat was in the fifth space one inch outside the nipple line, the area of cardiac dulness was increased, there was in the third left intercostal space a loud systolic murmur, the first sound at the apex was muffled, and arterial murmurs were present in the neck. The pulse was weak and almost thready. In the right eye were two large hæmorrhages, one above and one below the disc; they were striated at the margin, and white in the centre. The blood showed only 40·5 per cent. of the normal number of white corpuscles, and only 20 per cent. of the normal quantity of hæmoglobin. The patient remained in the hospital a fortnight, and was treated with lime-juice and put on full diet. He steadily improved; the retinal hæmorrhages became less distinct. The red corpuscles increased to 63 per cent. of normal, and the hæmoglobin to 35 per cent. The basic systolic murmur disappeared, but the apex beat remained in the same position. It was pointed out that this case presented the following points of interest: First, the influence of the previous dysentery in making the attack of scurvy severe, which severity was evidenced by the marked blood changes; secondly, the presence of retinal hæmorrhages, a very unusual occurrence as compared with other anæmic diseases, and which was to be explained by the fact that scurvy as seen nowadays was not severe enough to produce retinal hæmorrhages; and, thirdly, the dilatation of the heart. It was shown that this is the only recorded example of this condition in scurvy, and, considering the close alliance of this disease to other anæmic diseases in which it was known that the heart was fatty, it was presumed that here also this was the cause of the dilatation.

The PRESIDENT said that the chief interest would no doubt be centred in Mr. Neale's paper, in which a decided challenge had been given to the old idea that lime-juice is the main and only antiscorbutic, or at any rate that vegetables are so. Scurvy is induced by diet, not by a mere deprivation of food, but by a lack of some constituent essential to the maintenance of the blood in a healthy state. They required the chemist to tell them if there were any recent facts made out concerning the blood in scurvy, particularly as to its deficiency in salts. Then they required to know what amount of albuminoid food was necessary to prevent scurvy, and particularly the influence of fresh albuminoid food; also whether carbohydrates were beneficial because of the carbon and hydrogen they contained, or because of the salts with which such food was associated, and the nature of the salts that were of benefit. He thought Mr. Neale's suggestion of the use of blood as a diet most valuable, since it is the blood that is at fault. They were honoured by the presence of many medical officers of both services who had had experience in this disease, and he would follow the etiquette of the service by calling upon the juniors to speak first.—Dr. COLAN said that his experience had convinced him that the essential cause of scurvy was the absence from the food of something which is supplied by fresh vegetables, probably an organic acid, free or combined. He enumerated the characters of the disease, and stated that the worst cases he had in the Polar Expedition were those in which there was hydrothorax and hydropericardium, owing to the heart's action being impeded. The blood may be altered by the addition or absence of ingredients, probably the latter. Assuredly under certain articles of food the blood quickly regains the normal; and of all scorbutic effects the serous effusions are the longest to be removed. The conditions of arctic life might dispose to the disease; thus in the Nares expedition they were living in extreme cold, 105° below freezing point; were 140 days without the sun, and lived for six months on board without opening a skylight. Added to these conditions were depression of spirits and great physical fatigue, each man in the sledging parties having to drag 220 lb. weight over ice hummocks as large as houses. The great remedy is a sufficient supply of first vegetables and fruits, which contain malic, citric, tartaric, and other acids, and their potash salts, which are probably broken up into carbonates in the system, and supply some necessary element to the blood corpuscles, or albumen. He found lime-juice of the greatest possible service in that expedition. The supply came from Montserrat in the West Indies, and was fortified with 10 per cent. of spirit (it contained twenty-seven grains of citric acid to the ounce, the unfortified juice containing forty-two grains to the ounce). On the sledging expedition it was carried in skins containing eight ounces for eight men daily, and when frozen it was mixed with the pemmican. He insisted upon the pure juice being used, and thought no concentrated forms should be tried. In the absence of lime-juice, he advocated the alkaline citrates, tartrates, and acetates. Pressed vegetables were far less useful, they lost something in preparation, and he doubted if they could ward off scurvy, although a high authority in the French fleet considered that pressed vegetables did retard the progress of the disease. But in spite of the vegetable supply, scurvy broke out in six ships of that fleet, but it disappeared when, after arrival in port, a supply of fresh vegetables was obtained. He thought wine and beer were useful, but ardent spirits harmful. He also agreed with Mr. Neale as to the good derived from fresh meat, which should be raw, and, if possible, in large quantity; he had given his men the skin of the narwhal and walrus flesh, and it was the best substitute for fresh vegetables, possibly because of the lactic acid in the flesh. He had given lime-juice to Esquimaux suffering from scurvy. Milk also is a very good antiscorbutic. The instances of scurvy occurring on vegetable diet may be due to the fact that the essential salts were absent. He trusted that they would soon cease to talk of the treatment of scurvy in the adoption of preventive measures. Every vessel making a quick passage should have an ample supply of fresh vegetables, and sailing vessels should be made to call at ports to renew their stock, and, if this failed, a ration of lime-juice should be served out, beginning with an ounce per man daily, and if the voyage were prolonged, this might be increased to eight ounces daily. Many cases of scurvy are complicated by inflammation of the lungs, liver, and spleen, which lime-juice cannot avail. In our Polar Expeditions, with all the attendant hardships and fatigue, lime-juice was indispensable; and it would be well if, in addition, there should be added such vegetables as raw potatoes preserved in molasses or in earth, which could again be utilised for sowing mustard and cress. It might also be right to send out a second ship with a supply of sheep, which could be killed and preserved in ice. Most of his men on their return looked unhealthy and blotched, but after a month in England they regained a fresh and healthy complexion. He believed with Mr. Neale, that the fresh air obtainable by the *Eira* Expedition was a great aid. They lived in a hut; but in his ship they had to live for six months in darkness between the decks, with an atmosphere charged with ½ per cent. of carbonic acid besides great moisture. They would have been better off in a hut in spite of the cold, for cold was less harmful than bad air. He reiterated his opinion that the main prophylactic and cure for scurvy was a supply of fresh succulent vegetables or lime-juice or some of the organic potash salts. Next to that was fresh meat. In this he would be borne out by Dr. Ninnis, his colleague in the arctic regions, who had had great experience in scurvy in other parts of the world, and whose absence that evening he regretted.—Dr. DONNETT had never seen a case of scurvy on board any ship to which he had belonged, and his experience of the disease had been amongst seamen landed from merchant ships, often very badly provided with means for preventing the disease. From these cases he had drawn certain inferences as to its etiology—viz., that scurvy results from the absence of some protective influence contained in vegetable food, fresh flesh, and fish. He thought that neither cold, nor fatigue, nor mental despondency would induce scurvy of itself. In

the Russian Campaign of 1815, in spite of intense cold, no case of scurvy occurred in the French army. Fatigue, no doubt, predisposes to it. In Markham's and Bowman's expeditions great fatigue was endured, the ice hummocks being represented as a city reduced to ruins by an earthquake. The essential element in diet that is protective of scurvy, the absence of which produced the disease, was probably some acid—e.g., citric, oxalic, tartaric, phosphoric,—free or combined with an alkaline base. It was not true that certain races had immunity from the disease; he had seen it in Lascars, Chinamen, Esquimaux, as well as in Europeans. As to the value of lime-juice, he did not think that by itself it would prevent scurvy, but it should be associated with fresh food. Its value was great, however; for before its introduction, in 1795, ships could not put to sea on account of the disease, but five years later, in Lord St. Vincent's expedition, only ten men had scurvy. He regarded the introduction of lime-juice as a boon parallel to the introduction of vaccination, or to the discovery of the circulation. Fresh meat, when obtainable, was better than lime-juice, and potatoes were valuable. Kane, who suffered dreadfully from scurvy, said that if he had only been able to have frozen walrus he would have laughed at it. Dr. Donnett had examined the men in McClintock's two expeditions, and, although they were a long time separated from their ships, they remained healthy. After eighteen days' journey they shot a reindeer, and consequently were able to have fresh animal food. Contrasting the *Eira* Expedition with the late Polar Expedition, he pointed out that the *Eira* men could do as they pleased, and were not exposed to nearly so much fatigue. He thought that the medical profession should take up the question of scurvy upon merchant ships. The men sign articles with no knowledge of their contents; the captain consults his own interest, and cares nothing about the quality of the food supply; he lays in bad provisions, a few vegetables, and a little lime-juice. The Board of Trade should institute a systematic inspection into this matter, and the certificates should be countersigned after such inspection. The Royal Medical and Chirurgical Society might bring its influence to bear on the Board of Trade to enforce such measures.—Dr. JOHN RAE said that his experience of four years in the arctic regions—not, to be sure, so far north as Dr. Colan was,—had taught him that neither cold, nor work, nor other privations produced scurvy. He had been there in stormy weather, in a temperature of 30° or 40° below zero, without a fire; for in his first year they lived in a stone hut, and the door had to be opened whenever a fire was lighted to let out the smoke. Their food consisted chiefly of venison; they killed but few seal. They were perfectly healthy, and took a good deal of exercise. The confinement in the hut did not affect them. In the spring they started off and travelled some 1400 or 1500 miles, 500 miles being so rough that they had to carry everything on their backs, for the sledges could not be dragged over the high and rounded hummocks of ice. It was much harder work carrying fifty or sixty pounds' weight than dragging twice that amount. They got short of food, and consumed even the bones and claws of the few ptarmigan that they shot, but did not contract scurvy. They had no spirits or wine, only tea; and he valued highly some extract of tea supplied him by Dr. Bence Jones, of which they were able to make a warm infusion when the heat of the lamp was insufficient to boil water. He had suggested this extract for use in the Nares expedition, but his suggestion was not acted on. He travelled with two or three of his men about twenty miles a day, on one occasion twenty-four miles. He did not claim great credit for this. He and his men were accustomed to sledging, were able to kill game, reindeer, &c. The meat was chopped up fine and mixed with the animal's blood, which was preserved frozen in the stomach. Certainly they had not half the quantity of meat that the Leigh Smith expedition had; and perhaps if the *Eira* had been wrecked fifty miles away they might not have found any walrus. Again, the men of the *Eira* were all whalers and sailors, and yet were not under naval discipline. So in his own case; there were no officers, but he never had a word with the men. He opened a school and taught them. They first had to get food, which they risked their lives in procuring. His books placed against the wall froze together, and could be only thawed by taking them into their beds. In spite of this intense cold, &c., there was no scurvy. They had no lime-juice and hardly any vegetables. He was not afraid at all that scurvy would break out if men were given plenty of exercise and not kept too warm in winter. A great quantity of meat seemed necessary, about 8 lb. per man a day. Sir J. Richardson calculated that his men's ration was from 7¼ to 7½ lb. The reason why so much meat is needed is perhaps because the system requires something that is present in meat in but small amount. His own experience of scurvy was when he went to Hudson's Bay forty-nine years ago, as a newly qualified surgeon of twenty years of age. Scurvy broke out, and they had only a scanty supply of lime-juice, salt junk, and barely any vegetables. The men fell ill one after the other; the captain and first mate died, both of them being rather addicted to taking too much grog. As the spring advanced, the snow cleared off a hill near them, and a bed of cranberries was disclosed. He turned the scorbutic men to feed on these cranberries, and before the ship was ready for sea they had all recovered. There was also some wild vetch, with which they made soup. He agreed that people can live without vegetables, provided they have fresh food; and he had always recommended that cranberries should be taken on arctic expeditions, for he believed they contained substances most likely to drive away scurvy.

[We are compelled to defer until next week the report of the conclusion of the debate, in which Sir W. Smart, Dr. De Chaumont, and others took part.]

CLINICAL SOCIETY OF LONDON.

Hydrophobia.—Pseudo-hypertrophic Paralysis.

THE ordinary meeting of the Clinical Society of London was held on Friday, Feb. 23rd, Dr. Andrew Clark in the chair. In reference to Dr. Broadbent's cases of true and spurious hydrophobia, we are requested to state that the committee appointed by the British Medical Association to investigate this disease is still continuing its investigations, and the members of it would be glad to have the opportunity of themselves examining any cases of this disease.

Dr. BROADBENT'S first case was one of supposed Hydrophobia, treated by Chloral; recovery. The patient, a boy, aged twelve or thirteen, was admitted into St. Mary's Hospital on Feb. 20th, 1876, suffering from violent convulsive attacks, which had been going on for two days. The paroxysms were ushered in by a loud, deep breath, and there was first momentary rigid extension of the body, followed by rapid rotatory movements of the head, with loud laryngeal sounds, which lasted two or three minutes, after which the boy moaned and complained of pain in the head. These attacks were at once brought on by an attempt to drink, by the sight or sound of falling water, by the contact of a cold object, or pressure over the heart, or by light thrown into the eye in attempts at ophthalmoscopic examination. In the intervals the boy was conscious and fairly clear in intellect; his countenance was pale and anxious; the skin clammy; temperature normal; pulse 108, small, weak, and hesitating; respiration sighing. There were frequent extensive jerks of the body and limbs. The idea of hydrophobia had occurred to his parents, but the only dog the boy was known to have played with was alive and well. When asked if he had ever played with a strange dog, the boy said that he and some companions had found and shut up a strange dog, and that it had bitten him on the hand, but he had forgotten which. There was found, however, on the fleshy part, between the thumb and finger of the right hand, a small scar, surrounded by an extensive induration like that of a chancre. After a trial of nitrite of amyl, with no good effect, twenty grains of chloral, one ounce of brandy, and two ounces of beef jelly, were given by the bowel every three hours. The boy slept, had only slight occasional spasms, and was soon able to drink milk. On the 28th he was apparently well, and the chloral was suspended; but on the evening of the 29th he had a violent relapse, which continued. On March 1st chloral was again given till the 11th, when he had been up and running about the wards for several days. He remained in the hospital till April 2nd, and was kept under observation for some time longer. When he was taken to the hospital chapel, the first notes of the organ threw him into a state of uncontrollable excitement, with violent throwing about of the arms; and he could not for a time bear the sound of a barrel-organ. The case was submitted to the Society exactly as it was written out six years before from the notes of Mr. Jackson Garritt, at that time

resident medical officer. If the boy had died there would have been no doubt of the disease being ascribed to hydrophobia. The symptoms, while not corresponding in all particulars with those seen in some fatal cases, were closely similar, and the induration round the bite was corroborative evidence. The circumstances excluded emotional excitement as a cause of spurious hydrophobia; and there was nothing in the boy's previous history or character to suggest that he was a likely subject for hystero-epileptic simulation of the disease. Chloral was given, partly because it seemed best adapted, from its physiological effect, to relieve the spasm, partly in the hope that it might rob death from such a disease of part of its horrors.—Case 2: A healthy girl, a month after being bitten by a strange cat, complained of nausea, sickness, and loss of power in the arms, and next day, after feverishness and thirst, became excited and unmanageable, and was brought to the hospital at 10 P.M., July 31st, 1881. She was excited and delirious, but could answer questions; asked for water, though she could only take it out of a spoon after hesitating and with evident effort; it was swallowed with difficulty and provoked spasm of pharynx and neck. Chloral and bromide of potassium were given in beef-tea by the rectum. During the night the child became rapidly worse, more delirious and excited, with expectoration of viscid mucus and complete inability to swallow. She died exhausted less than twelve hours after admission. At the post-mortem examination there was some congestion of the brain and upper part of the spinal cord, especially in the floor of the fourth ventricle, and sections of cerebral cortex and all other parts showed congestion of vessels, and a few punctate extravasations into the perivascular spaces but no cellular infiltration.—Case 3 was one of pseudo-hydrophobia. A man aged twenty-six, who had gone through much excitement and anxiety, which had led to more or less alcoholic excess, five years after being bitten by a dog was suddenly seized with choking while drinking spirits after giving evidence in a court of law. Apparently some of the liquid got into the larynx. He was seized with panic that he was going mad. After three days of excitement and sleeplessness he was brought to St. Mary's Hospital, on Oct. 25th, 1876, about 10 A.M., in a wild and anxious condition, dreading the approach of liquids, and on any attempt to swallow them seized with spasms of the pharynx and neck, and gasping for breath. He swallowed solids. He could be quieted by firmness, but soon relapsed. He hawked, spat, and pulled at his throat. During the evening, after removal to an isolation ward, he was quieter, and could drink liquids. In the night he slept at times; but at others he was noisy, and he tried to strangle himself, and to get out of the window. On the morning of the 26th he was calmer. Through the day his condition varied; but at 4 P.M. he was rational and tranquil, and took bread-and-milk. Soon after this the visit of his wife and child brought on a paroxysm of greater and more violent excitement. In the evening he was put under chloroform, and could then both breathe and swallow. The excitement, however, returned, and was followed by exhaustion, and he died about 10.45 P.M. At the post-mortem examination, fifteen hours afterwards, the rigor mortis was very great. All the internal organs, but especially the lungs and kidneys, were congested. The membranes, cortex, and white substance of the brain, pons, and medulla were greatly congested, as was also the spinal cord.—Case 4: The patient, a boy aged thirteen years and a half, was admitted on Jan. 18th, 1883. He had been bitten by a puppy five months previously on the finger; the wound was cauterised within five minutes, and twice subsequently. The dog was confined, and a week later killed, because it was then thought to be going mad. The boy constantly talked about hydrophobia. On Jan. 15th he had pain in his back, but up to the 17th had only symptoms of a bad cold. On January 18th he could not swallow liquids or suck an orange; spasms were induced by the attempt. There was an excessive flow of saliva, with foaming at the mouth. He started up at times, saying he could not breathe, and was excited. On admission the prominent symptom was emotional excitement. He would not allow liquids to be brought near him. The abdomen was retracted and hard, and the face flushed and wild. Pulse frequent; temperature 100°. An enema of gruel and castor oil was ordered, and after this an enema of beef jelly, half an ounce of brandy, and twenty grains of chloral, every three hours. Three hours later he asked for, and tried to drink, milk; it was with much difficulty that he got the spout of the feeding cup to his mouth, and when he did so the fluid provoked a most violent spasm of the neck and arms and great respiratory distress. He afterwards, however, sucked an acid drop, and swallowed the saliva. Respiration was irregular and jerky (36), much moaning and whining, pain and tenderness at the epigastrium. The gruel and castor oil did not return, and the beef-tea and chloral had to be given upon it at seven o'clock. During the evening and night the patient became more and more excited and violent. The respiration was rapid, catching, oppressed; the pulse extremely frequent, perspiration pouring off the face, at times convulsive paroxysms of neck and arms. At 11 P.M., after a second enema of chloral, brandy, and beef-tea, he was so violent that restraint by bandages, &c. was necessary. At 2.45 A.M. twenty grains of chloral were given hypodermically, and the patient slept three hours. At 10 A.M. of the 19th he was quiet, listless, and drowsy, but contact of the hand or turning down the bedclothes caused a long deep inspiration. He made no complaint of pain. Respiration more even; pulse 130, small and weak; temperature 101°. At 11 A.M. the urine had to be withdrawn by a catheter, the amount was sixteen ounces, the sp. gr. 1030, no albumen or sugar, but urates thrown down on cooling. After this the spasms were slight and infrequent, but the exhaustion increased. There was much foaming at the mouth. The temperature remained at about the same point. Sordes formed on the teeth. The patient died at 10.25 A.M. on the 20th, about forty-three hours after admission. The administration of chloral was suspended when the spasms ceased, beef-tea and brandy being given. At the necropsy, three hours after death, the rigor mortis was extremely pronounced. The cerebral meninges, cortex, and white centres were extremely congested; puncta cruenta, too, numerous and large, membranes over pons and bulb slightly congested. No excess of serum in ventricles. Nothing noteworthy in chest or abdomen except two living round worms in small intestine just above the valve.—Dr. CLARK asked if the urine of the first boy was examined.—Mr. BROADBENT replied that it was often examined and always found normal.—Dr. DYCE DUCKWORTH thought that in all particulars the first case resembled cases of hydrophobia, and he could not doubt that it was that disease. He referred to a case he had treated in which life was certainly prolonged for some days by chloral. He thought that chloral was as useful as any other remedy in hydrophobia. The mode of action of chloral suggested its value; it should always be given with nutrient enemata. With reference to spurious hydrophobia, he said that if the patient be very gently blown upon, and the effect watched, it greatly aided the diagnosis, for the slightest stream of air induced severe paroxysms in the true hydrophobia and not in the false; he thought that chloral, at any rate, gave time during which the poison might be eliminated.—Mr. PICK did not think the first case was certainly one of true hydrophobia. There generally appeared to be some premonitory symptoms, one of which was an aching pain about the wound; this was absent in Dr. Broadbent's case, and there was malaise with a sense of impending evil, and when the attack came on there was between the paroxysms excessive mental terror; these also were absent in Dr. Broadbent's case. He therefore could not speak with confidence of the diagnosis.—Dr. WHIPHAM asked whether the spasm in the neck was always present in human hydrophobia. In neither of three cases in animals which he had seen was there any spasm in the neck excited by the sight of water. One was in a sow, another in a dog which tried to drink from a pond, and there was no spasm whatever, the third was also in a dog which tried to eat some bread-and-milk, but there was no spasm of the glottis or of the muscles of the neck.—Dr. EWART thought Dr. Broadbent's cases were very valuable, even if the disease were spurious. Hydrophobia was quite a misnomer as applied to animals. If there was a specific virus at all, what was rabies in the dog was rabies in the man. If rabies were true hydrophobia, what was false hydrophobia? What were the cases in which the symptoms were exactly the same? One set of cases might show special pathological changes and the other not; but we yet lacked a proof that the transmitted virus actually produced the cell infiltration in every case. The test of the incurability of true hydrophobia was unworthy of this age of medicine. The dog communicating a fatal attack might himself recover.—Dr. LONGHURST asked the total amount of chloral given in the first case, as it was a very powerful remedy, and the pathological changes might have been caused by the chloral.—Dr. CLARK asked

Dr. Broadbent to state exactly what led him to call the first true and the two latter false hydrophobia. The age of the first boy was one liable to *bizarre* nervous conditions, as intense excitement.—Dr. MAHOMED asked if it was not incumbent upon all physicians meeting such cases to try the effect of inoculation in lower animals.—Dr. CLARK said that the law did not permit of this.—Dr. DUCKWORTH said that at St. Bartholomew's Hospital Dr. Brunton had practised inoculation in their last case, and had obtained no result. They therefore had abandoned the experiment.—Dr. BROADBENT quite agreed that there ought to be a distinct name for rabies and similar diseases arising from other causes than rabies. The evidence of specific inoculation, and the presence of an indurated painful scar, enabled him to make the diagnosis. In the two spurious cases there was a history of great previous excitement, such as would lead to the paroxysms. But in the first boy there was an entire absence of any such condition. The last boy had 220 grains of chloral altogether; it was suspended for the last twelve or fifteen hours before death. He had not added up the total in the case of the boy who recovered.

Dr. J. KINGSTON FOWLER exhibited two cases of Pseudo-hypertrophic Paralysis in adults of the same family, and read notes of their cases. Case 1: H. F——, aged forty-four, a blacksmith's striker, married, ten children. A careful examination of the family history, and especially of the collaterals of the parents showed that no instances of the disease had occurred amongst them for at least three generations. The patient had had three attacks of acute rheumatism. When a young man he was remarkably strong. The first symptom of the disease, a peculiar swaggering gait, was noticed at the age of twenty-eight. This was followed six years later by a considerable loss of strength and weight. At the age of thirty-six he began to experience a sense of fatigue in the legs on over-exertion and a difficulty in mounting a flight of steps. He frequently fell down whilst at work, and when on the ground had much difficulty in rising again. He continued at work until 1879, when he was admitted into Middlesex Hospital under Dr. Cayley, and his calves then presented considerable enlargement, whilst the biceps and pectoral muscles were wasted. The patient was a healthy and cheerful-looking man of medium height. Intelligence was normal, and there was no affection of special or tactile sensibility. The sterno-costal portions of the pectorals, the biceps, rhomboidei, serrati, latissimi, and erectores spinæ were wasted. The triceps, the muscles forming the thenar and hypothenar eminences, the dorsal interossei and the external vasti and calf muscles were large and firm. There was no marked talipes equinus; the enlarged muscles generally were weak; the head and shoulders were thrown backwards. There was well-marked lordosis of the spine, disappearing on sitting down, the latter movement being accomplished with difficulty. When placed on his back he was unable to turn over or to resume the erect position. His attempts to do so were characteristic of the affection as seen in children. The patient had kept records of the circumference of his right arm and calf from the age of eighteen; these compared with the present measurements showed a diminution of four and a half inches in the girth of the former, and two inches in that of the latter. The electrical reactions, ascertained by Dr. Hughes-Bennett, were normal with faradism to the nerve trunks and to most of the muscles; the responses from the affected muscles were much diminished. Galvanism to the nerve trunks gave normal reactions, and also to most of the muscles, but with increased A.C.C. To the affected muscles the contractions were much diminished in quantity and altered in quality the A.C.C. = C.C.C. The knee-jerk was absent. The temperature of the skin over the atrophied muscles was about 1° higher than over the enlarged muscles. Iron, quinine, strychnine, and cod-liver oil had been given without much benefit resulting. Improvement had been observed under arsenic and faradism. Case 2: R¶ F——, age thirty, brother of the first patient following a similar occupation. In this patient the disease was in a much earlier stage; nearly all movements could be performed without difficulty, but muscular power was weak. At the age of twenty-seven he was noticed to have a difficulty in ascending a flight of steps, using the banisters to pull himself up. At the same time the arms and legs began to waste. The patient was a slightly built man, intelligent, and free from any obvious disorder. The sterno-costal portions of the pectorals, the latissmi, serrati, rhomboidei, teres, and biceps muscles were wasted; the triceps, infra-spinati, external vasti, and muscles of the calf were enlarged and hard. This patient had also kept records of the girth of his right arm over the contracted biceps, and also of his calves, from the age of twenty-one; a comparison of these measurements with those taken recently showed a diminution. This patient had not been under medical treatment. The opinion was expressed that these were cases of the same affection seen not unfrequently in children, and first named by Duchenne pseudo-hypertrophic paralysis. Reference was made to similar cases of this disease as it appears in adults recorded by other observers. It was thought that these were the first cases recorded in which the disease had appeared at adult age in members of the same family.—Dr. BROADBENT said the cases were very interesting, and were recorded with most praiseworthy accuracy. He had come to the opinion that the hypertrophy was an incident of age, in support of which he had alluded to two sisters in whom the disease came on between eighteen and twenty, and in whom the hypertrophy was much less than in children. This fact was also to be noted in Dr. Fowler's cases. He had seen a case coming on in a man about fifty. The disease was that of pseudo-hypertrophic paralysis in all its features except that there was scarcely any hypertrophy. Dr. Ross had described a similar case. He, therefore, thought the disease common in children prevailed also in later life, but that the hypertrophy was an accident of the active growth of childhood, while later the atrophy existed but was not masked by any hypertrophy in those of less active general nutrition.—Dr. GREEN said that the case he had recorded was twenty-two years old, and the disease followed an injury; the hypertrophy there was very considerable. He thought it was a question whether the wasting was not due to atrophy of the muscle tissue itself, which varied in different cases.—Dr. EWART mentioned that he recently saw a case in which he was in doubt as to the diagnosis, because the patient was a woman aged thirty-five, and there was no evidence of marked hypertrophy in any of the muscles; all the other symptoms were characteristic. He asked Dr. Fowler whether he had met with the records of the disease in any other adult females.—Dr. CLARK thought it was important to call attention to the diseases of anatomical units and systems of organs of which this affection was a good example.—Mr. FOWLER, in reply, stated that the disease was transmitted to males through females. The enlargement was chiefly due to the deposit of fat in the muscles. There was progressive atrophy preceding the hypertrophy.

Before the meeting Mr. Parker showed a child with Congenital Dislocation of the Hip Joints; and a case of Obscure Sympathic Affection of the Arm in a boy.

EPIDEMIOLOGICAL SOCIETY.

A MEETING of this Society was held on Feb. 7th, 1883, Dr. George Buchanan, F.R.S., President, in the chair.

Deputy-Surgeon-General A. C. C. DE RENZY, C.B., read a paper on the Sanitary State of the British Troops in Northern India, of which the following is an abstract. The object of the paper was to estimate the results of the measures taken to improve the health of the British troops in India since the date of the issue of the report of the Royal Commission on the Indian Army. The author first proceeded to fix a standard of comparison. He rejected the oft-quoted death-rate given by the Royal Commission—viz., 69 per 1000—as a standard, because it was founded on the results obtained in a period of incessant war—viz., from 1800 to 1856—and was to be regarded rather as a statement of the cost in life at which the British Empire in India had been built up, rather than as an estimate of the rate of mortality existing at the time when the report was issued. He took the death-rate of 1862, the year in which the Royal Commission submitted its report, as closely approximating the average death-rate of the troops at that time. The death-rate of that year, which was by no means a healthy one, cholera in a virulent form having visited many stations, was 27·25 per 1000. The author then referred to a table showing the death-rate for each year from 1862 to 1880. This period was one of almost unbroken peace, except in the years 1879 and 1880, and, in order to make the statistics of those years

fairly comparable with those of the previous years of the series, the figures relating to the troops on field service in Afghanistan were excluded from the table. The most marked feature in the table was the extraordinary fluctuations in the death-rate, which ranged from 11·64 to 42·89 per 1000. The death-rate of the later years was shown to be quite as high as that of the earlier ones of the period. The death-rate of 1880 was 27·73, that of 1862 being 27·25, per 1000. The death-rates of individual stations, as shown in another table, confirmed the conclusions indicated by the statistics of the Presidency as a whole. The stations continue as before to be subject to the most destructive epidemics, one or two years healthy, and then visited by cholera or enteric fever in a most virulent form. In 1877, for example, Morar had a death-rate of 12, and in 1878 one of 65, per 1000. Peshawur had a death-rate of 3 in 1877, and one of 141 in 1879. Another point clearly shown by the statistics of stations was the fact, of constant occurrence, that in the same season, of two stations at a very moderate distance apart, one was extremely healthy, while the other was decimated with cholera or enteric fever, proving conclusively that the epidemics were not due, as was usually supposed, to some general atmospheric influence. After showing that nearly half of the total mortality was due to cholera, dysentery, diarrhœa, enteric, and other fevers, the author discussed the causes of the excessive mortality from diseases so eminently preventable. He sketched the general sanitary conditions of Indian cantonments, but entered into a very full description of the state of the water-supply, which he considered the key to the whole matter, and he gave in detail an account of the numerous opportunities which occur in that country for the pollution of drinking water. The Royal Commission summed up their conclusions on the water-supply as it existed twenty years ago in these words: "It will be seen that the supply for permanent stations is the same as that usually adopted for armies in the field, somewhat similar methods have always been in use in uncivilised, or imperfectly civilised, populations." Great improvements have been made in other matters; magnificent barracks have been built at a cost of ten millions sterling; 26 per cent. of the troops have been located in the hills, but the water continues, in the author's opinion, in a state unworthy of a civilised people, and this is the reason why the death-rate has not fallen, and why epidemics of cholera and enteric fever continue so common. After quoting several high authorities, whose opinions on this point differ widely from those of the author, the case of Fort William, in Calcutta, was referred to as one in which sanitary requirements, as they are understood in England, were fairly satisfied. It is surely an encouraging fact that, while in the decade ending in 1880 the average death-rate of the troops stationed in the United Kingdom was 8·68 per 1000, the death-rate of the troops stationed in Fort William in the same period was only 10·60 per 1000. The prevalence of intemperance was referred to as an indirect effect of the present system of water-supply, cool, drinkable water not been procurable, the men acquire a craving for alcoholic drinks. The paper concluded as follows:—"The subject thus imperfectly dealt with is one of immense importance. The fabric of the British Empire in India visibly rests on the health of the British troops; but the importance of the subject extends far beyond them, it concerns the teeming millions of the native population. Orientals are fatalists; epidemics, they believe, are special dispensations of Providence with which it is idle, if not injurious, to interfere. When, as a sanitary commissioner, I endeavoured to convince native municipalities of the error, I was met by the argument, that if epidemics were preventable, why did not Government prevent cholera among the British troops? The constant recurrence of destructive epidemics among the British troops is the greatest obstacle to the progress of sanitary improvement. To refute Oriental fatalism, a clear demonstration of the preventability of epidemics is required; and such a demonstration can be best made in military cantonments." The author then submitted that the facts and figures laid before the meeting warranted the following conclusions:—1. That since the publication of the report of the Royal Commission in 1862 there has been no appreciable reduction in the rate of mortality among the British troops in Northern India. 2. That, with very few exceptions, the water-supply remains substantially in the state described by the Royal Commission. 3. That so long as the water-supply remains in this state the health of the troops will be at the mercy of any accident which may convey to them the contagia of such diseases as cholera and enteric fever. 4. That the case of Fort William affords ground for hope that the measures which have so reduced the rate of mortality in that fortress would produce equally good, if not better, results in the naturally more healthy stations of the North-West Provinces and Punjaub.—In the discussion which followed, the President, Sir Joseph Fayrer, Drs. Dickson, Gordon, Scriven, Manifold, Murray, M'Connell, and Mr. Shirley Murphy took part.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

A MEETING of this Society was held on Jan. 25th, 1883, Mr. B. Walker, President, in the chair.

Mr. R. J. PYE-SMITH related notes of a case of Injury to the Knee, with Rupture of both Crucial Ligaments. G. W——, a cabman, aged fifty-three, was admitted to the Sheffield Public Hospital on Dec. 25th, 1882, having twisted his right knee in falling from his cab. There was considerable lateral mobility of the joint and it contained some fluid. Pressure was applied by means of an elastic bandage over cotton-wool, and the swelling subsided, leaving extensive ecchymosis. Pneumonia soon developed at the right apex (the patient had been drinking heavily for six months past), and was fatal on the eighth day after the injury. Post mortem the internal lateral ligament and both crucial ligaments were found to be completely ruptured, the latter close to their femoral attachments. The central part of the cartilage of the patella was crushed into fibres, so as to present a plush-like appearance. The joint contained a few small clots of blood. The injuries to the ligaments seemed to point to forced eversion of the leg at the knee as their most probable cause. Extreme rotation of the leg inwards might possibly have produced them. There was no dislocation of the joint nor injury to the popliteal vessels. The upper lobe of the right lung was in a state of red and grey hepatisation.

Mr. G. S. TAYLOR related the particulars of a case of Malignant Polypus of Uterus. The patient, aged sixty-four, had been under treatment for nine years for attacks of profuse uterine hæmorrhage, which lasted for a few days or few weeks, and she died three days after the last attack. She menstruated at eleven years, married early, and had three children, the last forty years ago. There was always a great loss at menstrual periods, and no climacteric cessation. No pain was experienced, and the discharges between the hæmorrhages were never offensive and mostly watery. Attempts to explore the uterus brought on excessive bleeding. No growth ever descended through the canal of the cervix. After death the abdomen was opened and the uterus examined; it was five inches and a half long; outer surface smooth, presenting several cushioned projections; the os soft and patulous. The cavity was occupied almost entirely by a mass somewhat like placenta, and showing large vessels attached to the fundus and bathed in soft medullary matter. The uterine walls were considerably thickened from infiltration which in places formed nodules. Both ovaries were firm white masses, each the size of a pigeon's egg. Under the microscope sections of the growth, the walls of the uterus, and the ovaries exhibited the characters of medullary carcinoma. Mr. Taylor considered this to be one of those rare cases mentioned by West, Simpson, and a few other writers, in which a polypus of malignant structure grows from the interior of the uterus independent of previous disease of its orifice. The points of interest were the almost total absence of pain, the character of the discharge, and the long continuance of the disease.

Dr. MARTIN read a paper on Questions as to the Nature of Fever Poisons. Having reviewed some of the older theories as to the nature of the infective matter, he went into the germ theory, and broached the view that the phenomena of fever, be the special form what it may, are not produced by the mere presence of germs as germs, but that they are due to the presence of some toxic product, dependent upon the existence, growth, and waste of different species of germs in the systems of the patients affected. This product may be an excretion, or possibly a secretion, excreted or secreted by the germ, What its chemical nature may be Dr. Martin does not profess to know; possibly it may be alkaloidal in its constitution. He drew attention to Pasteur's experiments with the chicken cholera bacterium, when, with the fluid freed by careful filtration from the presence of

germs, he obtained by inoculation toxic and narcotic effects similar to those observed in the disease itself. Dr. Martin disagreed with M. Pasteur's conclusion, that because the effects were only slight and transient, therefore it could not be said that the disease was due to a poisonous product apart from the germs themselves. The toxic product, whatever it is, could not propagate itself and was soon cast out; but when the germ is living and multiplying there is a constantly increasing supply. Dr. Martin pointed out a fact that had come to his knowledge after his paper had been written, that Pettinkofer foreshadowed this view in connexion with the subject of cholera.

At the meeting held on Feb. 8th, 1883, Mr. B. Walker, President, in the chair, the Pathological Committee presented its report on Mr. Pye-Smith's specimen of tumour of femur, exhibited at the meeting on Jan. 11th. The opinion expressed was that the growth was sarcomatous; it consisted mainly of cells, varying a good deal in shape and size, but in most parts corresponding pretty much with those of a large round-celled sarcoma, together with a well-marked stroma of homogeneous structure surrounding most of the individual cells.

Mr. WALKER related the particulars of a case in which a silver plate with two artificial teeth attached passed per rectum. The patient, a woman aged forty-two, applied at the Rotherham Hospital on July 22nd last, stating she had swallowed her false teeth and that they were sticking in her throat. On examination, however, with the finger they could not be felt. On July 26th the plate and teeth attached were passed per anum. Mr. Walker exhibited the plate; it measured across about seven-eighths of an inch, and on either side was a fine hook.

Mr. SNELL exhibited photographs, and gave particulars, of a case of Extensive Scarring of an Infant's Face from Injuries at the time of Birth. The child had been brought to him at the General Infirmary last summer, when it would be about three or four months old, as the mother wished to know if the condition of the eyes could be improved. There was ectropion of both upper eyelids, especially the left, which exposed a good deal of conjunctiva. In addition to this, however, the forehead was seamed almost all over with cicatrices, which also ran over the nose, the point of the latter being puckered in, &c. On the left cheek was a large semicircular scar running from the nose to the mouth, but the right cheek was the most affected, and the right auricle seemed in a great measure destroyed and tied down by the surrounding cicatrix. The surface of the head was scarred also, and the condition here and in other parts was described in detail. The only explanation offered for this condition was that given to Mr. Snell by the medical man who, called in at the confinement, had arrived late, and found a midwife industriously rubbing with a towel the face and head of the baby. He desired her to desist, but to this he attributed the child's condition. Doubts were expressed by several gentlemen as to the sufficiency of this explanation.

Dr. DYSON showed the morbid specimens from a case of Mediastinal Tumour. The patient, a woman aged thirty-two, the mother of five children, had been under his care in the Sheffield Public Hospital. She stated she had been ill nine months, and attributed her illness to hurrying along the street once with a heavy child on her right arm. The tumour occupied the mediastinum, and had invaded the whole of the right lung, the left lung being unaffected. The superior vena cava and right phrenic nerves were completely surrounded, the former being only slightly patent. The new growth had also invaded the auricles, and, proceeding down the right side of the pericardium, had exerted considerable pressure on the inferior vena cava. This last circumstance explained the œdema of the lower extremities, and the immense distension and enlargement of the superficial veins on the abdomen. The growth had the appearance (microscopic and naked eye) of a lympho-sarcoma. Growths of a similar nature were found in the substance and in the surface of both kidneys, in the right ovary, and in one or two places subcutaneously. On the surface of the kidney and in the right ovary, the growths were caseating, and converted into greenish puruloid fluid. The symptoms were of the usual varied and distressing character, and the whole period of illness barely lasted a year.

Dr. PORTER read a paper on Lead Palsy, in which, after referring to the prevalence of cases of lead poisoning in Sheffield owing to the use of a lead cushion in file cutting, the lead bath in file hardening, and the lead-coated wheel or "lap" in penknife finishing, he quoted from some statistics he had taken from the patients suffering from this disease at the Sheffield General Infirmary. Twenty-five out of thirty cases which he noted had occurred among file-cutters, and he drew attention to the fact that in this trade the advent of symptoms was generally delayed; thus, in sixteen cases the average time between the first exposure to the poison and the first appearance of symptoms was fourteen years; in eight more the actual time was not noted, and in one case only did they appear directly after exposure. But although their appearance might be delayed for years, or they might be absent from first to last, the usual indications of general ill health which precede them were very seldom wanting, and many of these file-cutters who had never presented any of the symptoms peculiar to lead poisoning carried the indications of their trade in the unhealthy, cachectic appearance of their faces and the blue line on their gums. Referring to the relative frequency of the special symptoms of lead poisoning, Dr. Porter stated that in the thirty cases before referred to colic had occurred in twenty-seven, some loss of muscular power or paralysis in eighteen, and eclampsia in two. The characteristic blue line was present in twenty, and of the other ten cases six had not been working among lead for some time, and in three more the fact of its presence or absence was not noted. Speaking of lead palsy, he believed that when that was the only symptom of lead disease it occurred usually only after long-continued exposure to the poison; as in three such cases which came under his observation, one was after eighteen years, another after twenty-two years, and the third after thirty years' file cutting. Referring to the pathology of lead palsy, Dr. Porter alluded to the experiments and researches of Vulpian and Charcot, and stated that it was still a disputed point whether the paralysis was due to an anterior poliomyelitis, or affection of the ganglia of the anterior cornua of the cord, or whether it was to be regarded as the result of a general peripheral neuritis, independent of spinal lesion. In conclusion, he dwelt particularly on the importance of preventive measures being adopted among those who were unavoidably exposed to the action of lead.

Analytical Records.

HORDEUM MALT EXTRACT.

(LOEFLUND & CO., 148½, FENCHURCH-STREET.)

THIS extract is evidently made by the only satisfactory process—namely, by the concentration of the extract at the lowest possible temperature. It contains not only the maltose, dextrine, albuminoids, and salts of pure malt, but also the diastase, which confers upon the preparation the power of converting starch into maltose and dextrine. We have no hesitation in praising it, as we believe it may be thoroughly trusted.

PURE CONDENSED ALPINE MILK, UNSWEETENED.

(THE SWISS MILK COMPANY, GOSSAU, SWITZERLAND. ENGLISH AGENT: A. MOOS, 84, BASINGHALL-STREET, LONDON.)

The Swiss Milk Company seem to have succeeded in producing what has long been wanted—namely, a condensed milk unsweetened and free from antiseptic. In a sample which we examined we found that good milk had been selected and concentrated to about one-third. The milk as sent out is quite fluid, and is of course to be mixed with twice its bulk of water before use. If unopened, it will keep good for a considerable, though not for an indefinite, time. We found that some samples kept good for six or seven weeks in a warm room, after which time the casein coagulated. Many persons dislike sweetened milk, and to them this preparation will be valuable.

SPARKLING HYDROZON.

(ROSS & CO., WESTON-SUPER-MARE.)

We are always glad to notice attempts to vary the character and improve the quality of non-alcoholic drinks. The

cause of temperance is directly affected by any successes in these directions. Tea and coffee should always be used with moderation, and are almost poisonous to some persons, while soda-water and lemonade are enervating and therefore injurious to others. We think Messrs. Ross and Co. have produced a useful contribution to the list. Hydrozon contains phosphates and iron, but in very small quantity; is not too sweet, and has that peculiar fulness of flavour in the mouth which is called "body" in wine. We have tried it with invalids, and found it highly popular. In fact, in one case it was difficult to persuade the patient that the drink was really non-alcoholic.

AIX-LA-CHAPELLE THERMAL WATER.

(AIX-LA-CHAPELLE WATER COMPANY, 1, FENCHURCH-AVENUE.)

The Aix-la-Chapelle water is too well known to require description in these pages. It is an excellent table water, with mild tonic properties. The Company who supply it, wishing to extend it as widely as possible in England, have wisely arranged that it shall be sold at about the same price as ordinary English aerated waters.

CHAMPAGNE CUVEE EXCEPTIONNELLE.

(HEDGES & BUTLER, 155, REGENT-STREET.)

We only notice this wine—which is said to be a blend of the vintages of 1857, 1874, and 1876—because it appears to us to be a fair representative of the champagne which is best for medical use. It is dry, with excellent bouquet and flavour, and is well matured by age. Such wine is one of the finest of stimulants, without being what is often called "heady."

PALM COTTON DRESSING.

(J. G. HARTLEY, 12, NORFOLK-STREET, STRAND.)

This is an unsized paper made from pure palm cotton, and intended for surgical dressing. It is very soft and elastic, remarkably absorbent, and, what is somewhat curious, very tough. A bundle of it can be compressed by the thumb and finger into half its thickness, and each sheet will hold a considerable quantity of liquid. We have tried it for hospital use with decided success. Of course it cannot replace lint for all purposes, but it is so cool an application that in some cases it will be found an improvement; the price, moreover, is very low.

"THE FLYING DUTCHMAN" LIQUEUR.

(CHARLES WARD & SON, CHAPEL-STREET WEST, MAYFAIR.)

This new liqueur is, we think, a decided success. We do not remember to have examined anything like it before. Analysis has not shown us anything noxious in its composition, and it is certainly very pleasant in flavour, not too strong, and remarkably cheap. Considering the very high price of foreign liqueurs, the last-named fact is a strong recommendation.

PURE COFFEE.

(THE PURE COFFEE COMPANY, 101, LEADENHALL-STREET.)

The aim of this Company is to supply pure coffee at a cheap rate. The sample sent us was pure and of good quality, and the wholesale price is said to be not more than 11½*d.* a pound. Housekeepers, and particularly managers of large institutions, will be willing enough, we may be sure, to give such coffee a trial.

ITALIAN WINES.

(W. M. NICHOLS & CO., GREAT ST. HELEN'S, LONDON.)

We are surprised that the good and cheap wines of Italy are not more used in England. We have recently received from the above firm some samples that may serve as an illustration. The Tuscan wines, such as Chianti and Montepulciano, are pretty well known, Chianti especially; but how seldom do we meet in England with the excellent wines of Lombardy.

OVARIOTOMY STATISTICS.

MR. SPENCER WELLS presents his compliments to the Editor of THE LANCET, and will be much obliged if he can find room for the enclosed letter in this week's number:—

3, Upper Grosvenor-street, London,
Feb. 27th, 1883.

MY DEAR PROFESSOR GROSS,—You have published in the *Philadelphia Medical News* a statement comparing the results of my operations of ovariotomy in 1088 cases with those of three other operators in 381, 328, and 226 cases respectively, making a total of 935 cases. The mortality of my cases is given correctly at 22·15 per cent., and that of the other operators as 10·76, 10·67, and 11·94 per cent. On this plain statement, as you have published it, anyone would conclude that I am a less successful operator than my juniors. Indeed, the author of a very eulogistic review of my last book in the *American Journal of Medical Sciences* of January, 1883, misled by a false statement in the *American Journal of Obstetrics* (vol. xv., p. 547), that I "had gone on for twenty years operating on hundreds of cases with a mortality of twenty-five per cent.," takes the trouble to give what he believes to be a true explanation of the "high range of mortality in his [my] ovariotomies." He says that I had laboured for "an ideal success," but "his [my] own practice fell short of this ideal." If it were true that after twenty years operating I had gone on with a mortality of 25 per cent., while others did not exceed 10 or 12, some such explanations as those proffered by my able and kindly reviewer might serve as my excuse. But it is not true. When I had been operating for twenty years I had reduced my mortality to 11·62 per cent. The results of successive series of 100 cases had been made known from 34 in the first, and 28 in the second, to 17 in the ninth, and 11 in the tenth series of 100 cases. My cases of 1879, 1880, and 1881 had been published with results of 11·62 and 9·57 and 10·7 per cent., and in the preface to my book, published in May, 1882, I afforded proof that, "notwithstanding the fact of my being often called upon to treat patients rejected by other surgeons as unfavourable cases, the progressive diminution of the mortality still continues." I added, "It is still more gratifying to be able to add that this increasing success is not confined to myself, nor to British surgeons, but it is also established in Germany, France, and Italy." There really can be no excuse for this attempt to discredit me with a high mortality after twenty years' experience, as in my book (pages 214, 215) I had shown very plainly how in successive periods of five years the mortality diminished, and that in the

First five years	about	1 in	3 died
Second and third five years	,,	1 in	4 ,,
Fourth five years	,,	1 in	5 ,,
Last two years	,,	1 in	10 ,,

Or, putting it in another form, that in the

First five years	70	per cent.	recovered
Second five years	74	,,	,,
Third five years	73	,,	,,
Fourth five years	80	,,	,,
Two last years	90	,,	,,

I trust, my dear Professor, that you will accept my desire to stand well with my American brethren as a sufficient excuse for this long letter, and, with sincere respect,

I remain, yours faithfully,
T. SPENCER WELLS.

THE HAMMOND PRIZE.—The American Neurological Association offers a prize of 500 dols., to be known as the "Wm. A. Hammond Prize," and to be awarded at the meeting in June, 1884, to the author of the best essay on the "Functions of the Thalamus in Man." The prize is open to competitors of all nationalities. Essays are to be sent to Dr. E. C. Seguin, 41 W. 20th Street, New York, on or before Feb. 1, 1884.

CIRENCESTER COTTAGE HOSPITAL.—The committee were able, at the annual meeting held last week, to report useful work done by means of this hospital during the past year, as well as to present a favourable balance-sheet. The sum in hand (£197) it is intended to utilise for the purpose of effecting some alterations and improvements in the building. Messrs. Cossham and Wilson were elected surgeons in ordinary.

THE LANCET.

LONDON: SATURDAY, MARCH 3, 1883.

OUR readers have doubtless been watching with some interest the prosecution on the charge of manslaughter of Dr. DUNLOP, the Medical Officer to the St. Pancras Workhouse. It will be recollected that the offence of which Dr. DUNLOP was accused was that of improperly vaccinating a child, and thereby causing its death. The child in question was but six days old at the time of vaccination, and, it was alleged, was prematurely born, was a sickly child, and generally in such a condition as to render the postponement of vaccination necessary. For the defence it was conclusively proved that the child was probably of full time, of average weight, and that there was nothing in its condition to indicate the necessity for the postponement of the operation. The summons against Dr. DUNLOP was, therefore, very properly dismissed by the magistrate, and the case for the present has terminated.

But although Mr. DUNLOP may be congratulated on the failure of the prosecution to prove that he was guilty of the least want of judgment (indeed the evidence went to show that every possible care was taken), we cannot but regret that the inability of the prosecution to substantiate any case against him should have debarred the Guardians of St. Pancras, who were conducting his defence, from calling evidence which would have gone far to show that the disease from which the child died had probably no relation to the vaccination which preceded the death.

The history of the case, briefly told, is as follows:—The child was born on December 10th, was vaccinated on December 16th, and on December 23rd, when the arm was inspected, was found to be in good condition, the arm progressing normally. The following day the child left the workhouse; six days later the arm became red and swollen, while the vesicles assumed an unhealthy appearance; the child became comatose, and on January 7th died.

At the post-mortem examination, on Jan. 11th, the body was found to be much emaciated; no sores were present, except those resulting from the vaccination; the axillary glands on the same side as the vaccinated arm were somewhat enlarged, and the whole of the internal organs, with the exception of the brain, were healthy. But the entire surface of the brain was covered with a layer of pus one-tenth of an inch in thickness, thicker in some parts than others, and present on the upper surface to the same extent as on the base. No microscopic examination was made, but no tubercles could be seen with the naked eye. In the absence of any other visible cause, it was assumed by the medical witnesses who were examined that the condition of the brain was dependent on the ulcer of the arm. The question whether the unsatisfactory progress of the vaccination was not secondary to the inflammation of the brain was unfortunately not raised. This is the more to be regretted seeing that the absence of any affection of the lung militates strongly against the theory that the disease was of pyæmic origin; indeed it would be a matter of considerable interest to learn whether a simple meningitis of pyæmic origin, without any affection of other organs, has occurred within the experience of even those of our pathologists who have had the largest opportunity of witnessing such a condition, were it ever present. Nor does the fact that tubercle could not be found raise any presumption that the theory of the prosecution was correct; for a simple meningitis is a not uncommon cause of death in young infants, and the presence of tubercles in early infancy is rare.

If evidence such as that produced at the Clerkenwell Police-court is to be accepted as proving that death resulted even indirectly from vaccination, we shall undoubtedly find many of the deaths occurring amongst young infants from meningitis attributed to the same cause whenever vaccination has within a short time preceded the meningitis.

That the performance of this operation within a few days of birth is not attended with more risk than when done some months later there is now abundance of evidence to show, and it would be a calamity if the prosecution of Mr. DUNLOP should in any way lead to the many children, whose protection against small-pox can only be thus secured, being permitted to contribute to the already large proportion of our unvaccinated population. The case is one of so much interest, and has such important relations to the public health, that it is very desirable that further inquiry should be made into it; and we trust that those engaged in the case will bring it before the Pathological Society with this object.

WE do not regret, as some of its members seem to have done, that the Harveian Society has been engaged in discussing a report of one of its committees on the mortality referable to alcohol. It may be true that no very new conclusions have been reached, and that those which have been arrived at are of doubtful soundness. Nevertheless the subject is one of such great importance that it cannot be too often discussed, and can nowhere be so properly discussed as in the cool atmosphere of a Medical Society. Teetotallers of all grades claim very much credit for the recent vast increase in temperance and the remarkable diminution of the amount of alcohol consumed, and we are not disposed to withhold what they claim. But it is not the less true that much of the suspicion with which alcohol is regarded by the intelligent classes, and which is giving some anxiety to the Chancellor of the Exchequer, is due to medical teaching—and, let us add, to medical example—which, in the metropolis at least, is very decidedly on the side of temperance.

The Committee of the Harveian Society collected from private practitioners of the metropolis a large number—between 7000 and 8000—of cases of death. These cases were supplemented by returns of cases from the medical officers of several metropolitan hospitals and infirmaries, and cases investigated by the late Coroner for Middlesex, Dr. HARDWICKE, till the whole amounted to about 10,000, constituted as follows—7505 private cases, 1172 infirmary and asylum, 646 hospital, and 677 inquest. The Committee directed their attention to the following points: (1) the extent of the mortality referable to alcohol, and its propor-

tion to the mortality from all causes; (2) the proportion in which it is distributed between the two sexes; (3) the ages at which, and (4) the occupations in which, it chiefly occurs; and (5) the modes of death. The Committee divided the cases submitted to them into three classes—*A*, Deaths in no wise due to alcohol; *B*, deaths accelerated or caused by its abuse; and *C*, deaths wholly due to it. In this way they bring under *A* 8598 deaths, under *B* 1005, and under *C* 397. They thus sum up: the mortality among intemperate persons differs from that generally prevailing among adults in the following important particulars—viz., a fourfold increase in the deaths from diseases of the liver and chylopoietic viscera; a twofold increase in the deaths from diseases of the kidney; a marked increase in those from pneumonia and pleurisy; a considerable increase, and an earlier occurrence of deaths, from diseases of the central nervous system; an increase in deaths from atrophy, debility, &c. On the other side they find in the mortality of intemperate persons a decrease of half as much again in those from heart disease; a marked decrease in those from bronchitis, asthma, emphysema, and congestion of the lungs; a decrease nearly as great in deaths from phthisis, and a later occurrence, or at least termination, of the disease; a very large decrease in the deaths from old age. But accepting the main conclusions of the Committee, it will be seen that a very serious indictment is framed against alcohol, which only comes out the stronger when the details are considered. As an agent for producing degeneration, alcohol is unrivalled, and the committee find that the central nervous diseases which occur in the ordinary population between sixty and seventy, are antedated in the intemperate, and occur between fifty and sixty. But this is a charitable age, and the worst cases get a considerate judgment. Medical men have said to themselves, "Surely the agent that does all this harm must do some good. If so many diseases are caused by alcohol, surely some must be prevented." Some authorities have thought that cancer is possibly prevented by alcohol, though we are not aware that such a supposition rests on any substantial basis. But there has been a very general belief that tubercle is antagonised by alcohol, and the Committee give the sanction of their conclusions to this view, which is held by Dr. WALSHE, Dr. FLINT, and others. But even this is very doubtful. Dr. W. HOWSHIP DICKINSON — who is fully alive to the uses of alcohol, dietetic and therapeutic, and who has vindicated it from some of the charges brought against it by some pathologists — in a classical paper published in Vol. lvi. of the Medico-Chirurgical Transactions, has very seriously shaken the ground of this belief. He has taken from the very careful pathological records of St. George's Hospital, the post-mortem appearances—by far the most trustworthy data—in 149 cases of persons who were engaged in the liquor trade, and presumably drank more than others, and compared them with the appearances found in 149 other cases, chosen without bias, and the results were strikingly against the view that alcohol drinkers have an advantage in exemption from either lung disease or tubercular disease of any kind. They seemed to show that organs suffered in proportion to their nearness to the centre of absorption—the liver, the lungs, the bloodvessels, and the brain and nervous system. The facts as regards tubercle in the lungs were as follows in the alcoholic and non-alcoholic series respectively:—

	Alcoholic.	Non-alcoholic.
Miliary tubercles; no vomicæ; no tubercle elsewhere	4	3
Miliary tubercles; no vomicæ; tubercle elsewhere	3	3
Crude or cheesy tubercle; no vomicæ; no tubercle elsewhere ...	4	2
Crude or cheesy tubercle; no vomicæ; tubercle elsewhere ...	2	1
Tubercles and vomicæ; no tubercle elsewhere	4	2
Tubercles and vomicæ; tubercular disease elsewhere	23	13
Cicatricial apex; no tubercle elsewhere	1	0
Cretaceous mass; no tubercle elsewhere	6	4
Cretaceous mass; tubercular disease elsewhere	2	0

Thus there were in the alcoholic set of cases forty-nine lungs tuberculised, and in the non-alcoholic only twenty-eight. Dr. DICKINSON, on the relation of alcohol to tubercle in all parts of the body, says: "In each part of the body amenable to tubercle — brain, liver, kidneys, bowels, and peritoneum,—the frequency of its occurrence is almost doubled by the alcoholic pursuit. Attributing the excess, as we needs must, to the influence of the liquor, we arrive at an important and secure deduction that alcohol engenders tubercle."

But that our space is ended, we should have examined other conclusions of the Committee in the light of Dr. DICKINSON'S investigations. The Committee may object that Dr. DICKINSON'S cases are too few to justify deductions; but they are veritable facts as far as they go, and such facts as the Committee allow to be "more solid ground" than obtains in regard to the majority of their data. It is admitted even by those who take their data from the remarkable experience of the temperance insurance offices, that in some points abstainers are more vulnerable than moderate drinkers, and we believe that the lung is one of the points. But at any rate, Dr. DICKINSON'S facts seem to show that much alcohol favours tubercular and other lung diseases.

MR. NEALE'S paper on the Etiology of Scurvy based on the experience gained in the late *Eira* Expedition, read before the Royal Medical and Chirurgical Society on Tuesday evening, led to a prolonged, though we cannot say a very animated or interesting, discussion. There can be little doubt that the debate would have been a greater success had some of the earlier speakers been less prolix. Towards the end, when, owing to the lateness of the hour and the brief space left for the many speakers to offer remarks, the speeches were necessarily much compressed, the proceedings became more animated, and more interest was consequently exhibited. The majority of the speakers, too, were unfortunate in having little new to offer, much of the experience and most of the facts related having already been brought forward and thoroughly threshed out at the time of inquiry into the outbreak of scurvy on board the *Alert* and *Discovery* in Sir GEORGE NARES' expedition. Dr. RAE and Sir JOSEPH FAYRER, though adding little new

from a scientific point, made undoubtedly the speeches of the evening, the latter's Lucknow experience being very effectively told. Professor DE CHAUMONT'S speech, however, possessed the most scientific interest, and he alone of all the speakers touched on what ought really to have been the basis of the whole debate. But Professor DE CHAUMONT added but little to the excellent summary of scientific facts that he brought forward at the time of the inquiry into the causes of scurvy in Sir GEORGE NARES'S expedition. Indeed, throughout the debate this paucity of fresh information on the subject was manifestly apparent. This is the more to be wondered at since within the last few years very many interesting experimental facts bearing upon the etiology of the disease have been established; more especially has this been the case on the Continent. The nature of the inorganic constituents of blood has been thoroughly investigated by means of dialysis, and we are in a position now to speak with a degree of certainty regarding the relative proportions of the neutral, acid, or alkaline salts present in the tissues and fluids. Our ignorance with regard to these has always been a hindrance in previous investigations with respect to alterations in the composition of the blood caused by variations in diet or the administration of chemical agents. Moreover, considerable light has been thrown on the nature of the disease by German investigators by the experimental feeding of animals with acids and acid salts; in some instances symptoms were induced, and post-mortem appearances observed, closely resembling those found in scorbutic patients. Although not directly bearing on the subject of scurvy, Dr. RINGER'S researches into the action of the salts of potash, soda, and ammonia on the excitability and contractility of the heart, and Dr. GASKELL'S observations on the contrary actions of dilute alkalies and dilute acids on the vascular system, may be adduced as showing the importance of studying the minute alterations in the quality and quantity of the saline constituents in all so-called "blood diseases." It is also to to be regretted that the interesting questions raised by Dr. HALE WHITE'S paper were not brought under discussion. There is a growing feeling that many diseases in which anæmia is a prominent feature, and in which there is more or less textural alteration, are allied to scurvy, or are manifestations of what the older writers termed the "scorbutic constitution." We hope another occasion will arise when this branch of the subject will be specially brought forward for discussion, and Dr. WHITE'S remarks will receive the attention they so fully deserve. In conclusion, we congratulate Mr. NEALE in having fully proved his point with regard to the prophylactic powers of recently killed flesh and the use of the blood of the slaughtered animal in preventing scurvy. In future, no arctic expedition ought to neglect to secure an adequate provision of freshly slaughtered animal food, or of blood properly preserved from deterioration. The fact that the crew of the *Eira* received, in addition to the fresh meat rations, small quantities of preserved vegetables, casts no doubt on the beneficial action of the former. Vegetables, when preserved, have their antiscorbutic virtues impaired, if they are not altogether lost, from changes taking place in the composition of their saline constituents from the gradual inversion of their saccharine and starchy elements by acetic acid fermentation, which leads to the formation of acid instead of normal organic salts.

THOUGH the session has opened with wordy warfare, Parliament will probably ere long settle to the work sketched out for it in the QUEEN'S Speech, as well as to the consideration of other subjects of social interest, and some of which are of very special import to our profession and to sanitarians generally. A growing interest in sanitary matters has long been manifest in Scotland, and various important constituencies in the North have already availed themselves, by means of local Acts, of the increased knowledge of health requirements which has recently permeated the municipal intellect. In consequence of these many separate efforts, and the experience arising from such practical tests, an attempt at codification of the present laws, and extension in some much-needed directions, is being made in the General Police Bill for Scotland, so prominently put forward by the Government. As a whole the Bill is of the most promising character, shows a wide knowledge of the sanitary wants of towns, and is evidently framed after very careful deliberation with persons having decided opinions on health problems.

Some of the chief questions dealt with are settled on lines long recognised in these columns as desirable, but there are a few minor matters which it would be well at this stage of the Bill to see amended. The clause empowering the interference of the Home Secretary in towns whose death-rate has for five consecutive years reached a certain high point is but a reproduction of a similar clause in the Act of 1862. At that time the rates recognised as requiring such pressure were satisfactory enough, but now that the average mortality has been so far reduced, to leave the clause as then drawn is to make it inoperative. The clause dealing with the appointment of the "officer of health" should be made to refer definitely to a properly qualified medical practitioner; and in the face of all which has been recently written in favour of the appointment of specially trained officers for such work, better provision should be made for the combination of local authorities for this purpose. In Scotland there are but three medical officers of health wholly devoted to public duties, and a Bill which forms almost a complete code of municipal law should make provision for the increase of such highly trained officials by at least allowing adjacent portions of the county, as well as other burghs, to join for this purpose. The extended powers granted to the Commissioners in dealing with refuse from manufactories are on the right lines; and if the central authority had as complete powers in dealing with local authorities themselves our streams would soon become more limpid and pure.

We must heartily congratulate the advisers of the Government upon the manner in which they have treated the difficult subject of notification of infectious diseases. Beset themselves with advisers holding views condemned by the whole profession, they have adopted a method which, with regard to the chief question at issue, commands our warmest approval, calculated as it is, while relieving the profession of penal consequences, to throw the responsibility upon the proper shoulders, and inviting the co-operation of the medical practitioner, in cases where he may deem it for the public advantage that he should report. The householder is compelled to notify to the medical officer, but it might tend to

greater smoothness if notice to the nearest policeman were also to be deemed sufficient. While highly satisfied with the way in which the general question of notification is treated, we must take exception to the exclusion of measles, whooping-cough, and erysipelas, from the list of infectious maladies; and this, though fully recognising the value of the saving clause in the Government measure. It may seem a needless expense to pay for the intimation of all such cases; but then it is to be remembered that the subjects of the most common of these diseases are exactly those in the best position for spreading infection, that epidemics so frequently arise from intercourse at school, and that the mortality from measles and whooping-cough is often excessive. It is difficult to see why householders should have the bait of 2*s.* 6*d.* offered for reporting such cases. We would prefer to see this proposition dropped, as otherwise the fear of expense may cause opposition to the whole scheme of notification. It is otherwise with those who, as outsiders, make it their business to offer "first information" to the authorities, as, certainly, if those people are to be encouraged, it is only by offering money that their services can be obtained. This question of paying informers is a new one, and without the guidance of experience it is difficult to express a confident opinion concerning it; but, coming as it does from Professor GAIRDNER, it is at least worthy of respectful consideration. Perhaps the most knotty question in the whole Bill is this matter of notification, and as we believe its framers have so found it, we trust they may be able to carry at least the central idea in the manner proposed.

Hospital accommodation is inseparably connected with the question of notification, and before the clause empowering, in given cases, the removal of patients can have appreciable effect much more energy must be shown in providing these buildings. Now and again we hear of a slight effort to provide means of isolation; but, as a whole, Scotland is ill-provided with hospitals for infectious diseases, while buildings for the isolation of the patients' friends have yet to be begun. The clauses dealing with this question need little change, as no patient can be removed against the wish of the attending practitioner; but it would have been better if his consent had been required before removal. The clauses dealing with contagion through school attendance are shorn of much importance by the exclusion of measles and whooping-cough above referred to, but the requirement of a medical certificate before a family visited by infectious disease can resume attendance at school is a much needed and important reform. Both parents and teachers are rendered liable to fine if children return to school without these certificates of safety.

The difficulty of prompt action with regard to the milk supply in the presence of infectious disease has been the occasion of considerable agitation and many local Acts, and it is pleasing to notice that this important question has been thoroughly dealt with in the Scotch measure. Municipal action has heretofore been confined to dairies in towns, but it is now proposed to take cognisance and powers concerning the quality of milk at every stage, from the farmer's byre to the consumer's table.

We have said enough to show the importance of this measure, which we trust with the business qualities and concerted action of the Scotch members, we may soon see become law. There is one more important and concluding criticism we would offer. Let the word "may" throughout the Bill read "shall"; and do not leave it to every trifling borough and sleepy hollow throughout Scotland to say whether they will avail themselves of this beneficent measure.

THAT the present relations of coroners and medical practitioners are eminently unsatisfactory must be conclusively evident to all who are even casually acquainted with the reports of inquests which the daily and weekly press abundantly supply. On the one hand, medical practitioners are often driven to give medical certificates of causes of death in cases where they have reason to think an inquest desirable and even necessary, because the coroner decides otherwise; in a large proportion of cases where inquests are held the coroner calls no medical evidence, although without it a causeless verdict has to be returned; and not unfrequently a medical practitioner has to submit to a lecture, not to say abuse, from a coroner, for having given a certificate of the cause of death, which the Births and Deaths Registration Act of 1874 says *shall be given* in every case in which a deceased person has been attended in his last illness by a registered medical practitioner. Coroners, on the other hand, complain, not always without a cause, of manner in which medical certificates of the cause of death are sometimes given (facilitating registration and burial) in cases where inquests should be held. Public interest undoubtedly demands that all fatal cases of violence, as well as all cases of sudden death and of deaths occurring under suspicious circumstances, should be brought under the notice of the coroner. At present, however, no satisfactory machinery exists for securing this desirable end. Moreover, in the exercise of their irresponsible discretion, scarcely two coroners agree as to the definition of the classes of cases in which inquests are necessary or desirable. In some parts of the country no inquests are held in a large proportion of deaths from violence, while in others the inquest cases are twice as numerous as the deaths from violence. One of the metropolitan coroners recently published in a daily contemporary, under the signature of "Coronator," a letter setting forth views upon the office and duties of coroner which deserve the consideration of all interested in this important subject, and in the impending legislation thereon. The letter is mainly noteworthy as presenting the coroner's view of some of the points in dispute; and "Coronator's" claims of prerogative are, we confess, somewhat unexpectedly wide. Undoubted as is the public advantage that results from frequent inquests respecting deaths in public institutions, we very much doubt whether ratepayers, or the public generally, would entertain the claim that inquests should be held upon "*all* persons dying in prisons, workhouses, and public and private lunatic asylums." Can "Coronator" be aware that more than 40,000 deaths occur in these institutions per annum in England and Wales, and that this recommendation would more than double the total number of inquests held? Neither can we agree with "Coronator" that it is either expedient or desirable, even if practicable, that "*all* certificates of the cause of death given by medical men should be submitted to the coroner previous to their being forwarded to

the registrar of the district." Legislation might enact that copies of all medical certificates should be forwarded to the coroner by the registrar immediately after registration; but the claim that registration should be invariably delayed until the certificate had passed through the hands of the coroner, would be intolerable alike to the public and the profession. At the same time it is most desirable that medical practitioners should in all cases of violence, and of deaths occurring under suspicious circumstances, withhold their certificate until the case had been referred to the coroner. The interests alike of the public and of the profession require this caution on the part of the certifying practitioner in the present unsatisfactory state of the law governing the holding of inquests.

Annotations.

"Ne quid nimis."

THE MEDICAL REGISTER.

THE early appearance of the Register for last year is noteworthy. We trust time will show that in other respects the Register is satisfactory. The volume, like all other work of the registrar, Mr. Miller, suggests much care and regard to lucidity and neatness. The volume contains all the Medical Acts up to date, and which by next year we fondly hope will be out of date. It also contains the Dentists Act. At page 69 is a table containing the total number of persons registered annually from 1876 to 1883. The numbers for the respective years are as follows: 22,713, 22,841, 22,564, 22,516, 22,936, 23,275, and 23,801. It is unsatisfactory, after all the notices given, to find that 311 names have been erased under Section 14 of the Act, which requires the removal of the names of those whose address cannot be ascertained after due letters of inquiry.

PAYING PATIENTS AT ST. THOMAS'S HOSPITAL.

AN official report of two years' working of the pay-wards of this hospital has just been issued. The wards, which are adapted for the reception of 41 paying patients, male and female, had been in working order for twenty-two months up to Dec. 31st last. During the first ten months ending Dec. 31st, 1881, 261 patients availed themselves of this novel opportunity. The result, it is alleged, proved so beneficial, and was so highly appreciated by this class of patients, that the numbers for the year 1882 were increased to 371, and the daily average in 1882 in round numbers was 35, as compared with 23 in 1881; thus proving, we are told, the necessity for the institution and the appreciation of it by the public. The majority of the patients were from London and the vicinity, but there were several from the country, and some from the colonies, India, and he United States, and were from a class for which the "St. Thomas's Home" was principally intended—viz., those living in chambers and lodgings, strangers and visitors to London, and persons arriving from abroad in ill-health or suffering from accidents or other injuries. The number of applicants has frequently been in excess of the accommodation, and the governors of St. Thomas's Hospital are so satisfied, not only with the good done, but with the financial results, that at the termination of another year they may deem it advisable to seek authority to open another ward for the admission of this class of patients. While the report may be gratifying from the governors' standpoint, it is not so obvious that it will be equally satisfactory from the standpoint of those for whom the hospital was originally founded—we mean the sick poor. St. Thomas's Hospital is endowed for the medical relief of the poor, and the establishment of pay-wards seems a perversion of the charity. The success of the scheme doubtless proves the desirability of establishing pay-hospitals, but it does not prove that the authorities of existing charities are at liberty to convert these charities into financial speculations.

PNEUMATURIA.

IN two recent numbers of *La France Médicale* Dr. Guiard proposes the term "diabetic pneumaturia," to denominate a condition which he has observed in four cases of urinary affection in the male, complicated with glycosuria. This condition consists in an emission of gas from the bladder and is said to be independent of any communication with the alimentary canal. The presence of the gas, which has been conjectured, but not yet proved, to consist chiefly of carbonic acid, is explained by the supposition that the glucose has undergone a process of fermentation in the urinary bladder. The escape of the gas occurs in an irregular manner during some part of the act of micturition, and may give rise to a gurgling noise. The existence of the fluid is manifest by no symptoms or physical signs apart from those significant of the associated disease. It has been thought by older observers that the mucous membrane was capable of exhaling gases, but that must be regarded as very problematical. Again, the introduction of air from without during the process of catheterism, especially where the bladder is hypertrophied and dilated, has been assigned as a possible explanation. Dr. Guiard has not been able to satisfy himself of the existence of the torula, nor of the usual products of the alcoholic form of fermentation. There seems to be no obvious reason why the torula should not be introduced from without, by means of the catheter, but until such an occurrence is proved, and until it is made more clear what the nature of the gas is, there can be but little use in speculating on the subject which, under any circumstances, will hardly be regarded in any other light than in the nature of a clinical curiosity.

VENTILATION OF THE UNDERGROUND RAILWAY.

SINCE first public opinion, stirred to indignation by the intolerable foulness of the "air" in the Metropolitan Railway tunnels, insisted on the discovery and adoption of a sufficient system of ventilation, the Company has been exemplary in its endeavours to find a complete remedy. With great alacrity and sound commercial acumen, the chairman and directors of the Company acted energetically when the original complaints were made—now some fourteen years ago. They did within a few weeks *precisely* what was suggested by their first and principal Mentor, the *Globe*. From that time to this the work of improvement has never ceased, although at times it has flagged somewhat. It is only fair to make this acknowledgment, and it should be remembered, to the credit of the Company, at a time when the somewhat clumsy but energetic efforts of the railway engineers to establish an approximately perfect system of ventilation on their lines are being perhaps somewhat captiously opposed and too severely criticised. For ourselves, we think it would have been well if the Company had adhered to the policy originally suggested, and promptly—though only on a limited scale, carried out—namely, the acquisition of house property adjacent to the line at short intervals, and the opening up of considerable lengths of tunnel. There is no other mode of ventilation so effective as this. Even the area of a single house or garden will afford a space for opening the tunnel to an extent which

cannot fail to enhance the purity of the underground atmosphere to a degree greatly in excess of the result obtained by any "ventilator" technically so called. Limited atmospheres will not, as a rule, be purified *secundum artem*. The gratings made by the Company in the middle of a thoroughfare, as in the Euston-road, do little to relieve the air below. Foul vapours are obstinate, and refuse to be discharged through narrow openings; they are beaten back, and lurk in the recesses of a roof, or cling to walls, or even lie on the ground, rather than escape through the small apertures opened for their exit by "shafts" and gratings. We have little faith in the success of the ventilators by which it is proposed to purify the Underground Railway in Westminster and along the Embankment. Let the Company purchase a few sites and open up their lines at short distances. This is the best and, as we believe, the only way to succeed.

THE MICROCOCCUS OF GONORRHŒA.

DR. STERNBERG, who some time ago described a micrococcus in gonorrhœal pus, both in the cells themselves and free in the intercellular fluid, and which has been assumed to be the special virus of this disease, has communicated an account of further observations on this subject in a recent number of the *Philadelphia Medical News*. He has adopted the experimental method of observation, and his results can be briefly summarised thus: The micrococcus is constantly present in gonorrhœal pus; it has in all cases the same morphological appearances, and no other organisms than it develop in culture fluids inoculated with this pus. A culture fluid containing these micrococci introduced beneath the skin of a rabbit, or into the healthy male urethra, produces no noticeable result; but the same fluid introduced into acid urine, recently passed and free from micro-organisms, causes it to undergo the alkaline fermentation. Further, the micrococcus found in urine which has spontaneously undergone the alkaline fermentation is identical in appearance with that obtained by cultivation from gonorrhœal pus. The first experiment was to obtain by cultivation a fluid in which the living organism was contained, and free from every possible chemical or other contamination and source of error. Dogs and rabbits were inoculated with this fluid in the urethra, vagina, conjunctiva, and beneath the skin, and always with a negative result. Seven experiments were then made upon patients in the San Francisco City and County Hospital. Small dossils of cotton-wool well saturated with the fluid—either the thirteenth, fourteenth, or fifteenth cultivation—were introduced into the urethra, and left *in situ* for a quarter of an hour. In four the culture fluid was neutral; in one slightly alkaline; in none was any result obtained. Similar inoculation experiments have been made, but with less care, by Bokai in Pesth. He inoculated the urethras of six medical students with a fluid containing cultivated gonorrhœal micrococci; in three of them a typical urethritis developed, and in three there was no result. There is of course a possible source of error in this experiment, which in Dr. Sternberg's is excluded, as his subjects were patients confined in a hospital and constantly under observation. The next step in the series of experiments was the inoculation of sterilised urine with similar culture fluids as had been used in the previous experiments; in all cases the urine became alkaline and turbid from the development of micrococci like those in the culture fluid, and like those found in urine undergoing the spontaneous alkaline fermentation—the well-known micrococcus ureæ. Further experiments showed that this organism may differ in size considerably as a result of cultivation in different fluids and under different conditions, but that it is a hardy species which thrives in a variety of organic liquids, and is not so sensitive as regards temperature and the presence of various salts as some other forms—e.g., the septic micrococcus. A temperature of 60° F. is not sufficient, however, to promote its active growth, and exposure for ten minutes to a temperature of 140° is sufficient to destroy its vitality. These experiments are of considerable interest. They agree with many other facts adduced against the specific nature of gonorrhœa, and they show the need of caution against accepting the discovery of the presence of a micrococcus in a morbid discharge as proof of the *rôle* played by the organism in the causation of the disease.

A RESIDENT COLLEGE FOR THE LONDON HOSPITAL.

THE situation of the London Hospital in the midst of one of the poorest and most densely populated parts of the metropolis, while it brings to the institution unrivalled advantages in the way of clinical material, brings to it equal disadvantages in its aspect as a medical school. The hospital, with its 800 beds and its 50,000 out-patients, possesses opportunities in the way of acquiring medical and surgical knowledge with which perhaps no other like institution in this country can compete. But in spite of the glamour of romance that the author of "All Sorts and Conditions of Men" has thrown around the unsavoury regions of Whitechapel, Stepney, and Mile-end, it must be confessed that those localities offer little inducements as places of residence, and are scarcely the parts of London in which the most impressionable period of a young man's life could best be spent. For many years the hospital and college authorities have had before them the necessity of building a residence for their medical students, and at last that necessity has framed for itself a definite plan, and the matter has emerged from the nebulous condition of mere suggestion. On Feb. 20th, at a meeting of the house committee and the hospital staff, it was resolved, on the motion of Dr. Andrew Clark, to undertake the erection of a suitable resident college for the students of the hospital, and a committee was formed to carry out this resolution. The money required will be raised by private contributions on the principle of a limited liability company, and it is probable that the building-site will be provided by the house committee, in that spirit of liberality which they have always shown towards the Medical College, and the advancement of medical education. The intended buildings will be able to accommodate some seventy or eighty students, and will be provided with a dining-hall, smoking- and reading-rooms, and such accommodation as will contribute to the comforts of the tenants for the time being. The rapid increase in the London Hospital Medical College renders some such movement necessary, and in the general interests of medical education we wish it every possible success.

HYGIENE OF WRITING IN SCHOOLS.

AN interesting paper has recently been published by Berlin on the influence upon the eyes and the spines of school children which so simple a matter as the position of the copybook in writing may exert. It is based upon the report of a commission appointed to investigate the effect of slanting writing in the schools of Würtemberg. In writing or drawing with straight lines the visual axes move, by preference, in two general directions, vertical and horizontal, because in looking upwards or downwards, or to either side, their paths are straight, while in diagonal movements they describe a curve. It was discovered that 93 per cent. of the children who were under observation made the down-strokes in a direction nearly at right angles with that of the base line—i.e., the line connecting the centres of rotation of the two eyes and forming a triangle with the visual axis in conver-

gence. This is done with the least strain when the copy-book is tilted towards the left; when the child is compelled to write with the book parallel to the edge of the desk, he brings the base line perpendicular to the down-strokes by turning his head towards the right and twisting his spine. This contortion brings the eyes nearer to the page, and the left eye nearer to it than the right. In a discussion on this subject at the meeting of the Ophthalmic Society, at Heidelberg, Laqueur and Manz favoured the slanting system of writing with an oblique position of the book, on the ground that it throws the work more on the flexor muscles of the forearm, which are naturally stronger than the extensors, and Berlin dwelt upon the fact that this system admits of greater rapidity of execution. The surface of the common slate being shiny and presenting an insufficient contrast with the letters necessitate a nearer approach of the eyes and consequent excessive accommodation and convergence—the most important factors in the development of myopia—and Cohn has therefore caused artificial white slates and special pencils to be manufactured, which offer the conveniences which have given the old articles universal currency among former generations of children without their hygienic defects.

THE REAL REMEDY FOR IRISH DISTRESS.

MR. TREVELYAN would seem, from a short speech he made in the House of Commons on Tuesday evening last, to have taken a clearer and more accurate view of Irish distress and its remedy than his predecessors. The right hon. gentleman "declined to speak of reform as a means of repressing crime." He would not make the introduction of measures for the redress of Irish grievances and the relief of Irish distress the reward or price of obedience to the law, but would treat the two questions as wholly distinct—reform and justice, improvement and order. In this the Secretary to the Lord Lieutenant is right, and by adopting this line he places the policy of the Government on a solid basis. The present situation in Ireland is, as Mr. Trevelyan described it, one of rottenness and impracticability. The peasantry are simply victimised by non-resident landlords on the one hand, and political agitators on the other. The Irish poor are miserably poor, and they are so downtrodden, and hoodwinked by their pretended "friends," that nothing short of a vigorous policy of plain-dealing, extending over long years, can accomplish any substantial improvement. They herd together like cattle, they exist under the most depressing and unwholesome conditions, and they feed like the pigs with which they are closely associated. Meanwhile, they are so ignorant of facts, and so completely the slaves and tools of those who have the upper hand, whether landlords or agitators, that it is impossible they should know the truth about law or government, or even about the usages of life among civilised communities. The priests of Ireland are taken from the peasant class, educated in the jargon of their cloth at the ecclesiastical schools, and they return to their people with prejudices confirmed and eyes unenlightened. From a sanitary point of view alone this is most disquieting. The masses of the lower class population of Ireland are always in a condition to starve or to be swept away by pestilence at any evil turn of events. English help is useless as now administered. Mr. Trevelyan pointed out that "the British taxpayer lost every halfpenny he contributed at the time of the great famine," and he might have added the money subscribed did the least possible amount of good. It is strictly true that when the English nation is called to contribute to the relief of the Irish, it is really to perpetuate "the greatest misery of the people" the dole is made. Ireland is, in fact, in the position of one of those rookeries or nests of poverty and vice in this metropolis, which are kept up by the wrong-headed policy of landlords, who let wretched tenements at a high rental to casual lodgers, and of philanthropists, who regard these places as "fields of usefulness," "vineyards" in which to labour and "be useful." If it were only because Ireland is so near our own shores, and the distress and disease of her people must involve the distress and disease of our own population, it would be urgently imperative that a sufficient remedy should be found, and that without delay. It is satisfactory to know that Mr. Trevelyan recognises the real need and is striving to relieve it.

THE RECAPTURE OF LUNATICS.

MR. CAMERON'S question in the House of Commons and his letter to *The Times*, will again direct attention to the working of those Acts which deprive the insane of the benefits of the law of Habeas Corpus, and place them in the position of suspects under the operation of a perpetual Coercion Act. It is obviously an unsatisfactory state of matters which renders it impossible for a lunatic to secure a full investigation of his case by an impartial tribunal. It may be, and we believe is, the fact that in the great majority of cases the Lunacy Laws are well and advantageously administered; but this is not because the Acts are themselves good, but because the men in charge of the system happen to be honest, earnest, and able. As a matter of observation, it may be stated that the action of the courts of law is practically governed by the recommendations of the Visitors; and the Commissioners in Lunacy being a board of might is necessarily held to be also one of right. We do not doubt that the outcome is excellent in the main, but the system is wholly bad. Whether the particular lunatic in whose case Mr. Cameron has interested himself is a fit subject to be at large, we have no means of judging; but the fact that the Lord Chancellor has communicated to the Home Secretary his official opinion that the escaped suspect has been rightly rearrested—although, as it would seem to outsiders, the law has been most grossly and flagrantly violated in the act of rearrest—does not in the least degree reassure us on the point at issue. It is useless for Mr. Cameron to do any more in the matter. The poor victim of the Lunacy Laws is practically doomed to imprisonment, whether rightly or wrongly. He is in the grip of authority, and from that grip none, whether actually or by a romance of law, insane, can escape.

BILHARZIA HÆMATOBIA.

AN interesting contribution to our knowledge of the Bilharzia hæmatobia, and its influence on those parts of the human body which it infests, has been recently published by Dr. Zancarol, of Alexandria. As our readers know, the adult worms, which are of separate sexes, inhabit the veins not only of the urinary but also of the digestive tracts. It has been said that the changes so frequently found in the kidneys are the direct result of the presence of the parasite. Dr. Zancarol opposes this view; he points out that the ova and embryos are chiefly confined to the lower quarters of the urinary passages, and believes that the renal alterations are secondary to cystitis. Specimens of kidneys and other parts of the urinary tract were demonstrated before La Société Médicale des Hôpitaux de Paris, together with microscopical preparations taken from a man who died with the symptoms of uræmia. The right kidney was in a state of marked hydronephrosis. The left kidney showed much fibroid overgrowth in places. The walls of the ureters were notably thickened. The ova of the nematode were detected in but small numbers in the most superficial part of the vesical mucous membrane. A second demonstration was given of the intestines removed from a man who had suffered during life from chronic intestinal

ulceration. The surface of the sigmoid flexure was studded with vegetations which, in the fresh state, had the appearance of internal hæmorrhoids. These elevations were found, on microscopical examination, to consist of folds of the mucous membrane, the meshes of the stroma of which were stuffed with the eggs of the parasite. Dr. Zancarol stated that ova from the intestines have a spine which is situated laterally, whilst those from the urinary passages have a terminal one.

FATAL INTERNAL URETHROTOMY.

AT a recent meeting of the Clinical Society of Maryland, Dr. Latimer related a case of a man about forty-eight years of age, who came to him suffering from two strictures in the penile portion of the urethra, which led to "a good deal of delay" in micturition. With Otis's urethrotome these strictures were cut to admit a No. 16 English sound into the bladder. The man immediately got up and went home to the country. The same evening he had retention of urine, and a No. 12 catheter was passed; next morning he voided about a gill of urine, and in the evening his doctor drew off about the same quantity of water, together with "a few drops of blood." The patient died the following morning from suppression of urine. The published report of the case is very imperfect, but it seems impossible to escape the conclusion that the death was due to the operation. Internal incision of the penile urethra has been by some considered an operation as free from peril as it is easy of performance, but such a case as Dr. Latimer's must be taken to qualify such an opinion. In this case, however, not only was there no investigation of the patient's previous history, but no examination of the urine was made, and he was allowed to go home immediately after the operation. We hope that on this side of the Atlantic such a practice has no followers. In the ensuing discussion Dr. Chambers alluded to records of six fatal cases of this operation performed upon strictures situated in the first three inches of the urethra, clearly showing that this operation is by no means void of danger.

FILTH FOUNDATIONS.

ALTHOUGH Mr. Justice Fry in his recent decision in the trial of Goodacre *v.* Watson may have trespassed beyond the limits of the case immediately before him, yet the general public cannot fail to be grateful for a summing up which will probably do more to save them from having their future houses built upon refuse and filth, as they often have been hitherto, than anything which has occurred within recent times. Mr. Watson was in the habit of shooting on to a piece of land within the district of the Fulham Board of Works the scraping of roads, sloppy or otherwise, and the contents of ashpits from Fulham and from Kensington. After certain processes of sifting, the "soft core" was placed under four or five feet of earth with a view of being made the foundation of houses for human habitation; and it was this monstrous practice and the still more monstrous attempt to justify it, that Mr. Justice Fry denounced in such strong terms, as being calculated to bring disease and death into households. It was, however, the actual nuisance occasioned by the process that led to litigation, and the offensiveness being abundantly proved, an injunction, which was subsequently made perpetual by consent, was granted. One phase of the proceedings deserves special notice, inasmuch as it affects the duty of the sanitary authority and of its officers. In a letter addressed to the *Daily Telegraph*, the medical officer of health for the Fulham District endeavours to shield his authority from some of the rebukes dealt out to them by Mr. Justice Fry, and he explains that the plaintiff in the case complained to them as to the nuisance, and that "directly they were informed that a nuisance had been created," they instructed their officer to advise them on the subject. Now, it is here that in our opinion grave error has arisen, and constantly arises. It is the duty of a sanitary authority and of its officers to make themselves acquainted with the conditions within their district which are calculated to cause nuisance and injury to health, and to deal with them without waiting for private individuals to complain or to take proceedings in courts of law. The same filthy preparation for house foundations has long been in progress in many parts of London, its continuance is well known to the authorities, and those who, to use the judge's words, think it "consistent with their duty to allow these things to be shot on to land," and who fail to initiate action for the protection of their constituents, deserve every word that was said with respect to such a course of proceedings by Mr. Justice Fry.

LIVERPOOL ROYAL INFIRMARY.

IN December last the Mayor of Liverpool called a Town's Meeting to consider the position and requirements of the Royal Infirmary. It was decided at that meeting that a new hospital was needed to carry on properly and efficiently the important work imposed upon the institution, and that for this purpose a sum of £100,000 should be raised. We are glad to learn that already the sum subscribed amounts to £78,000. The committee have determined to build the new hospital on the site of the existing one, as it is central, readily accessible to the staff and patients, and close to the Medical School and Nurses' Institution. This site is, however, not quite large enough for the new hospital, and is adjacent to some "objectionable premises" which constitute a nuisance. The committee have appealed to the Mayor and City Council to obtain powers to enable the Corporation to place a plot of land in their possession adjoining the infirmary at the disposal of the committee of that institution. By this means an area of nearly 24,000 square yards would be available for the new buildings. We would venture to warmly support the application of the committee, and the ready response already made to the appeal for funds shows that the citizens of Liverpool are desirous of making their leading medical charity worthy of their rich and famous city. We cannot doubt that as the money is forthcoming, the land on which to build a thoroughly suitable, well-planned hospital will also be provided. We would urge that it is the duty of those who have subscribed to the building fund to see that it is spent only in the erection of a hospital in every way adapted to the necessities of the city and the neighbourhood.

OVERCROWDING IN GLASGOW.

THE *Sanitary Journal* for this month contains an interesting paper, which was recently submitted to the Health Committee of Glasgow by Dr. James B. Russell, medical officer of health to the city. During the past twelve months overcrowding has been on the increase, it having grown in proportion to the leniency in the fines imposed in the police courts; and, as the result of a night inspection, 1932 out of 38,434 houses, or 5 per cent., were found to be overcrowded. The overcrowding which has taken place has also been of the worst sort. By far the largest proportion of it has occurred in tenements consisting of single apartments, 85 per cent. of the cases met with being of this description; and not only so, but in the majority of cases it has depended on the presence of lodgers in these single apartments. The sanitary evils of such an arrangement are too obvious to need much comment, especially in view of the circumstance that in the average of cases some five or six inmates were found in every room, each inmate having only about 197 cubic feet of air-space; but, as pointed out by Dr. Russell, the moral

and social evils are also enormous. In these rooms every function of life, from a birth to a death, is performed, and this in the presence of persons, whether children or adults, consisting of both sexes. It is here, as has been indicated before the recent Commissions on the Contagious Diseases Act and on the Protection of Young Girls, that "the most hideous vices of our large cities originate."

TYPHUS AT GREENOCK.

WE had hoped that the discredit which used to attach to certain Scotch towns of harbouring typhus no longer held good. We regret, however, to notice that there is an outbreak of typhus in Greenock. This has been the subject of a certificate by the medical officer, and the statutory notice under the Police Act has been issued by the town clerk requiring householders to report within twenty-four hours all cases of infectious disease occurring in their houses. Fifteen cases have occurred in seven separate households. In one family of nine all but one have had the disease, and the father, a foreman of gasworks, and the mother and a daughter, have died. At a meeting of the Police Board blame was thrown by Bailie Smith and others on the medical man in attendance on the families chiefly affected for not intimating or causing to be reported to the medical officer of health the cases. Three or four weeks seem to have elapsed, and then the discovery of the cases was made on the complaint of the foreman above alluded to, who afterwards fell a victim to the disease. It certainly seems a pity that the disease was not reported as soon as it was diagnosed, but before affixing blame we should like to hear the medical attendant's own account of the matter. In any case, all will doubtless heartily co-operate in trying to extinguish so infectious a pest.

DEATH OF BARON JULES CLOQUET.

THIS celebrated anatomist and surgeon died on Friday, the 23rd ult., at his residence in Paris, in the ninety-fourth year of his age. Baron Cloquet was one of the oldest, if not *the* oldest, member of the profession in France. He took his degree in 1817, became Agrégé by *concours* in 1824, and Professor of Surgical Pathology in 1831. He was the senior member of the Academy of Medicine, having been elected in 1821, and was also a member of the Academy of Sciences. He was made a Baron by the late Emperor for his distinguished services, and was raised to the dignity of Commander of the Legion of Honour in 1860. He was the author of several important works on Anatomy and Surgery, and his monograph, in five volumes, an Anatomy was for more than a generation the most trusted work on the subject. Operative Surgery is also much indebted to Professor Cloquet for several new instruments he had introduced into practice and the improvements he effected in the old ones. Beyond the infirmities of old age, the deceased Baron had enjoyed very good health, and it is only within the last three months of his life that he was obliged to lay up for some urinary troubles, which terminated a most useful and honourable career.

THE OPINION OF A "DENTAL SURGEON."

IT is satisfactory to find that at least one Judge on the Bench recognises the limits of the specialty created by the quasi-medical, and altogether equivocal, title created by that anomaly of the Statute-book, the Dental Practitioners Act—namely, "dental surgeon." Mr. Justice Field has decided that "a dental surgeon" cannot be regarded as an authority on the subject of acute diarrhœa, alleged to arise from bad food supplied by the owners of a passenger ship. We are so thankful for small mercies in regard to the interpretation of this monstrous Act, that we must confess to a feeling of very great pleasure in chronicling the legal fact of this ruling. In many "populous districts" wherein "dental surgeons" and "surgeons" in dentistry combine their licensed tooth-drawing with the dispensing of drugs—in short, keep a "doctor's shop"—it is most desirable that the local public should understand that the fact of being a "dental surgeon" does not make a druggist a *medical* authority even in so common a malady as "diarrhœa." Those who live at the West-end of the metropolis have no notion of the ignorance evinced by the multitude in the East in relation to matters medical.

THE ERICHSEN TESTIMONIAL.

A PUBLIC meeting, presided over by Prof. John Marshall, F.R.S., will be held in the Botanical Theatre at University College, on Saturday, the 10th inst., at 2.30 P.M., for the purpose of presenting the testimonial recently subscribed for by a large number of Mr. Erichsen's friends and former pupils. The marble bust, executed by Mr. Hains Thorneycroft, A.R.A.—an excellent likeness as well as a work of art—is, we understand, to be placed in the Anatomical Museum of University College.

SPONTANEOUS CONTRACTIONS OF THE UTERUS.

AN extensive series of experiments on the occurrence of spontaneous uterine contractions in the mammalia has been made by M. Dembo, who has communicated an account of his observations to the Académie des Sciences. The observations were made upon 123 animals, and lead to the following conclusions:—There are, strictly speaking, no spontaneous contractions of the uterus, but the organ may be readily made to contract by different agents, and the movements which have been regarded as spontaneous are really excited by extraneous influences. The gravid uterus may be made to contract much more readily than the unimpregnated organ, especially under the influence of thermic excitation. In the cow, when one uterine cornu is alone gravid, this contracts much more energetically than the other under the influence of the same stimulation. If the abdomen of an animal is opened with great care, in a room properly warmed, it is extremely rare to see any contractions. If the uterus, or the vesical wall of the vagina, is stimulated by electrical, mechanical, thermic, or chemical agents, the effects observed are as follows:—The effect of chemical stimulation of the uterus is almost *nil*. If chromic, nitric, or acetic acid is applied to the wall of the vagina, contractions of the uterus are rarely produced. Mechanical excitation, however, is a powerful stimulant of uterine contractions, whether the uterus is in its normal connexions or has been previously separated from the body. Thermic influences, cold and heat, have a powerful effect on the uterus of all animals, and the degree of excitation is in proportion to the difference between the temperature of the uterus and of the air of the chamber. This thermic excitability increases during pregnancy. Dembo has succeeded in causing the expulsion of a fœtus from the uterus of a rabbit by plunging it into a bath of 45° C., while the strongest faradisation failed to produce the same result. As an illustration of the influence of temperature, and the erroneous conclusions to which it has given rise regarding the occurrence of spontaneous contractions, Dembo mentions that such contractions were frequently observed in a rather cool laboratory at Paris, while on a repetition of the observations in the well-warmed laboratory of Stricker at Vienna, no contractions could be observed, and in a cold slaughter-house the contractions were most energetic and persistent. These observations throw great doubt on the conclusions of Trommell, who has lately demonstrated, as he believes, the occurrence of spontaneous contractions by

introducing a tube, and registering the movements by a hæmo-dynamometer. It seems probable that the contractions registered were not spontaneous, but were produced by the mechanical irritation of the tube or of the liquid employed.

ARTERIO-VENOUS ANEURISM.

AN interesting case of varicose aneurism, occurring in the practice of Dr. Gripat, of Angiers, has been recorded by Dr. Polaillon. A boy, aged eleven years, was wounded with a knife in the bend of the elbow. When the wound was healed, an aneurismal tumour, the size of a small nut, was found. This remained stationary for forty-two years, and then suddenly it enlarged enormously, with œdematous swelling of the arm and forearm, and rupture of the sac appeared imminent. The tumour was the seat of marked pulsation, and a bruit and thrill extended some distance up and down the limb from the aneurism; the radial pulse was abolished. Amputation of the arm was performed, and when a dissection of the part was made, the sac of the aneurism was found full of fibrinous clots, the brachial artery was very atheromatous and flattened, and the brachial vein was obliterated up to the upper part of the arm. On tracing the vein down it was found to open into the sac of the aneurism, the communication having been obliterated by the venous thrombosis. In this case, therefore, a varicose aneurism had become an ordinary aneurism. The report of the case is so brief that no data are given whereby we may judge of the order of events, whether the clotting in the vein was antecedent to, or a sequel of, the clotting in the artery; and whether the sudden enlargement of the tumour, with the serious disturbance in the circulation of the limb, was connected with the clotting in the aneurism or vein, either as cause or effect. Nor is it stated in the report whether the nature of the aneurism had at any time been recognised.

PROFESSIONAL PERILS IN IRELAND.

MR. PORTER, Surgeon to Her Majesty in Ireland, has received a threatening letter, has been placed under police protection, and has to proceed armed about his professional duties. Mr. Porter conducted the post-mortem examination of the bodies of the much-lamented Lord Frederick Cavendish and Mr. Burke after their atrocious murder in the Phœnix-park, and gave evidence at the recent investigation, held in Kilmainham, as to the nature of their wounds, and as to the character of the weapons with which probably they were inflicted. For this offence sentence of death has been pronounced on him by the Vehmgericht.

RICKETS AND SYPHILIS.

ALTHOUGH some physicians have attributed to inherited syphilis an important part in the production of rickets, it is certain that this opinion is erroneous. Nevertheless, there is nothing incompatible in the two diseases; they may, unquestionably, coexist, and it is probable that the malnutrition due to the specific disease may be a potent factor in the development of rickets in such a case. M. Lannelongue has recently had the opportunity of examining the organs of a boy, aged three years, who presented the symptoms of both diseases. There was an undoubted history of syphilis on the maternal side. The child presented a characteristic rash about the bottom some days after birth, which lasted a long time and was not treated. Some time later it suffered for six months from snuffles. The signs of rickets in the osseous system first appeared in the right humerus, then in the femur, and afterwards became general. At the autopsy areas of grey consolidation, having the aspect of gummata, were seen in the lungs. The bronchial glands were of a yellowish cheesy appearance, quite different, the report says, from that of tubercular infiltration. The liver was small and its fibrous portions were thickened; the spleen was in a similar state. The osseous lesions were those of rickets. The epiphyses were soft and contained much "tissu spongoïde." Large oval swellings were present on the shaft, which, on section, showed a piece of atrophied ancient bone surrounded by much of the sponglike tissue. The bones in places were seen to have suffered incomplete but never transverse fracture. M. Lannelongue wisely refrains from drawing any positive inferences on the subject of the relation between syphilis and rickets.

THE HUNGARIAN PHARMACOPŒIA AND ANTISEPTIC DRESSINGS.

WE have received from Dr. Louis de Csatáry of Buda-Pesth a copy of the recent "Additamentum ad Pharmakapœam Hungarieam." The first among the Pharmacopœias of Europe, it has paid the tribute to English surgery of adding Lister's and other antiseptic dressings to its list of adopted medicaments. Under "Ligamenta Antiseptica" we find Chorda carbolata (catgut), Filum sericeum antisepticum (carbolised silk), Gaze salicylatum (salicylic gauze), Lana gossypii salicylata (salicylic wool), and Tubuli præparati carbolati (drains). This is an example which other Pharmacopœias would do wisely to follow.

PERISPLENIC SUPPURATION.

OF all the forms of intra-abdominal suppuration collections of pus around the spleen are perhaps the most rare, and certainly have received very little attention. Two cases of this condition have been lately met with by Zuber, and from the facts of these and other recorded cases he has arrived at certain conclusions. Purulent collections may be detected in the upper part of the abdomen which are, properly speaking, not perisplenic, but really occupy an irregular space bounded by the stomach, spleen, colon, and diaphragm. These collections are the result of a circumscribed peritonitis secondary to affections of the spleen or alimentary canal. Infective inflammations of the spleen (including the lesions of malarial disease) and round ulcers of the stomach play the principal *rôle* in the production of these intra-abdominal abscesses. Abscesses due to perforation of the alimentary tract may contain gas, and then the physical signs simulate those of pyo-pneumothorax. Whatever the origin and gravity of these abscesses, they must not be looked upon as beyond the resources of modern surgery.

ASSUMPTION OF FALSE TITLES.

AT the Otley Police Court John Mitchell Rhodes was lately fined for using the title of L.S.A. falsely. He had obtained the qualification of Associate of Apothecaries, and on the strength of that had used the letters L.S.A. in about a hundred cases of certification, chiefly vaccination cases, and in other ways he carried on the practice of a surgeon. He pleaded guilty and, by an arrangement agreed to by both sides, was fined £20. The case is fully reported in the *Wharfedale and Airedale Observer*, Feb. 23rd, 1883.

THE GOVERNMENT MEDICAL BILL.

A LITTLE delay, we understand, has occurred in the drafting of the Government Bill; but there is no reason to doubt that it will be ready for introduction to the House of Lords in a few days.

THURSDAY, March 22nd, is the day fixed for the installation of Mr. John Bright as Lord Rector of the University of Glasgow.

PROFESSOR W. H. PANCOAST, at a recent clinic in the Philadelphia Hospital, introduced a young man who some twenty-four years ago had an appendage removed from his left cheek—an appendage which was nothing else than an imperfectly developed infant with hands, feet, and trunk, but no head. Upon dissection, the monstrosity was found to be provided with heart and gastro-alimentary tract as well as the organs referred to. At the request of Sir James Paget a cast of the detached mass and a photograph of the child before the operation were furnished at the time to the museum of St. Bartholomew's Hospital. The only sign of the operation now remaining is a deep scar on the left cheek of the man who was operated on when but seven months old.

IT has been decided by the governors of the Cork Lunatic Asylum to request the guardians of the Cork Union to provide, with as little delay as possible, accommodation for those harmless lunatics and idiots at present in the asylum. These classes should be maintained in the workhouse, and are not fit cases for an asylum, which is intended chiefly for the care of dangerous lunatics. The governors have also informed the guardians of various country unions that if this class of patients, who are legally chargeable to their respective unions, are not immediately removed, they will feel it their duty to take decided steps to enforce their removal.

OUR Paris correspondent informs us of the death of a French lady, Madame Roudier, widow, which took place at Millau, in the department of Aveyron, at the advanced age of 105 years, as authenticated in the municipal register. The old lady had no malady whatever; she went about within a few days of her death, and was in full possession of her mental faculties to the last. Life is said to have gradually left her like a lamp in which the oil had been burnt out.

A CASE was tried lately at the York Assizes, Toronto, in which a woman preferred an infamous charge against Dr. J. E. White, who was summoned to attend her for a miscarriage. The absurdity of the charge was at once recognised by the jury, who without hesitation returned a verdict for the defendant. The *Canadian Practitioner* suggests the establishment of a defence fund for the purpose of defraying the costs of rebutting scandalous accusations of this kind.

AT a meeting of representatives of metropolitan Poor-law guardians held this week at the board-room of the City of London Union, to consider what action should be taken upon the report of the Royal Commission on Small-pox and Fever Hospitals, it was resolved to appoint a sub-committee to prepare a scheme for dealing with infectious disease in London, and, upon approval, to present it by deputation to the President of the Local Government Board.

THE concert to be given at St. Andrew's Hall, Newman-street, by the Strolling Players' Amateur Orchestral Society, in aid of the British Medical Benevolent Fund, has, we are informed, been postponed from Feb. 28th to March 8th. The object is one which must commend itself to the sympathies of the profession. Tickets may be obtained of the hon. secretary, Mr. Edward East, 18, Clifton-gardens, W., or at the Hall.

WE have received from Mr. Barraud of Oxford-street two portraits of the Premier. The word "life-like" may be emphatically employed in the description of these very excellent photographs.

AT the advanced age of ninety years, John Wilkinson, M.D. St. And., died last week at his residence in George-street, Limerick. The deceased gentleman was the senior surgeon to the County Limerick Infirmary, and the author of a paper on cases of Popliteal Aneurism. Dr. Wilkinson was a man generally respected, and was unusually generous in his donations to charitable institutions, medical and otherwise.

THE Public Health Society of Germany will hold its annual meeting in Berlin from the 16th to the 19th of May next. Water-supply and the utilisation of sewage will form subjects of discussion. In the latter Professor Virchow will take part, and in the former Professors Wolffhügel and Tiemann.

THE Birkenhead Bridewell is stated to be in so bad a sanitary condition that the stipendiary magistrate of the town is reluctant to remand prisoners to its walls. One of the keepers is said to have died of typhoid, and the wife of the deceased to be lying ill with the disease.

THE proposal for the erection of a hospital for infectious diseases at Oxford is for the present in abeyance, pending the receipt by the Local Board of counsel's opinion as to the liability of the Radcliffe Infirmary to admit infectious cases into its wards.

THE late Mr. Duncan Vertue, formerly of the East India Company's service, bequeathed to the Royal Infirmary, Edinburgh, the residue of his estate, which, it is reported, will enrich the funds of the charity to the extent of over £90,000.

THE *Nineteenth Century* for the present month contains an important article on "Our Hospitals," from the pen of Mr. H. C. Burdett, who, from his knowledge of the subject, possesses exceptional claims to take part in the discussion on the administration of our medical charities.

THE terms of the Supplemental Charter, for which the Royal College of Veterinary Surgeons is petitioning the Queen, are printed in the *London Gazette* of Feb. 23rd.

ANTHRAX VACCINATION.

KOCH'S REPLY TO PASTEUR.[1]

IT will be within the memory of our readers that at the International Congress of Hygiene, held at Geneva in September last, M. Pasteur delivered an address upon the attenuation of virus, and at its close referred to the points in dispute between Professor R. Koch and himself. Professor Koch, who was present, reserved critical discussion of M. Pasteur's work, and thus what seemed likely to be a warm personal controversy was spared the Congress (see THE LANCET, 1882, vol. ii., p. 507). Professor Koch has now redeemed his promise in a pamphlet just issued, extending over forty pages, and published in the German and French languages. The pamphlet is a strong indictment of M. Pasteur's method of experimentation and hasty generalisation, and we propose to give here a brief summary of its contents.

Professor Koch begins by expressing his disappointment that M. Pasteur had not added any new facts to the subject in his Geneva address, which he characterises as a polemic directed solely against himself, and, whilst admitting

[1] L'Inoculation Preventive du Charbon. Réplique au Discours prononcé à Genève par M. Pasteur. Par le Dr. R. Koch. Cassel et Berlin: Theodor Fischer. 1883.

the eminent services rendered by M. Pasteur, he shows how contrary to the spirit of true science his inquiries have been. There is a wide difference between the method employed by M. Pasteur and that followed by Koch in all these researches into the nature of infectious diseases. The latter starts with the aim of discovering the parasitic organism in the tissue, and secretions of the diseased animal, and testing the value of such discovery by inoculations with the virus after cultivation. This was the method which he pursued with regard to tuberculosis, and which has also enabled Felhuisen to demonstrate that erysipelas depends upon micrococci found in the diseased skin. M. Pasteur, however, assumes that infectious diseases are due to microbes, and does not establish this by searching for them in the body. This assumption has led him into grave error in the case of rabies and in equine typhoid; for in the former he has relied upon the inoculation of rabbits with the saliva from a case of hydrophobia, and in the latter upon inoculation of the nasal mucus of the diseased horse, as proof of his discovery of the virus in each of these cases. But, as Koch points out, even normal human saliva contains pathogenic bacteria; and inoculated rabbits have died in twenty-four hours from a disease which was undoubtedly septicæmia. Moreover, the bacterium described by M. Pasteur as the agent in both these diseases was not to be distinguished from the known form of bacterium met with in the septicæmia of rabbits. He accuses M. Pasteur not only of want of due precaution in obtaining the pure virus, and of too hasty conclusions, but of endeavouring to conceal the methods he pursues. The main part of his "reply" is devoted to the subject of anthrax—viz., its etiology, the attenuation of the anthrax virus, and the alleged immunity from anthrax obtained by vaccinations. He claims priority over Pasteur in the discovery of the condition of the origin and dissemination of the spores of anthrax bacilli and their relation to the disease, his researches being published in 1876, or one year prior to Pasteur's first publication on the subject. He shows that M. Pasteur's assertion that birds are insusceptible to anthrax because of the high temperature of their blood, and that by artificial cooling they may be rendered susceptible, is inacurate. For Oemler has shown that out of thirty-one fowls inoculated with anthrax eleven contracted the disease, and that other birds, with a much higher temperature of the blood, as sparrows, were very susceptible. Nor does M. Pasteur's experiment of immersing fowls in cold water need refutation; for it is well known that any condition likely to lower vitality renders animals more susceptible to the action of the virus. A more important difference between them is as to the manner of natural infection. Pasteur holds that the anthrax spores from the bodies of diseased animals that are buried in the earth are taken up to the surface by earthworms, and that cattle are infected by inoculation owing to the mouth being wounded by eating rough forage. Koch shows that the bacilli will multiply outside the body, in dead plants, and that their spores probably exist on the surface of the soil in marshy districts, which explains the infection of animals in places where there have been no interments of infected bodies. The earthworm theory is therefore superfluous. He defers his criticism of the mode of infection till he comes to the subject of "vaccination." He then proceeds to discuss the subject of the attenuation of virus, which Pasteur has shown in the case of fowl cholera and in anthrax to be effected mainly by exposure to oxygen in the air. He has also shown that to confer immunity two vaccinations are necessary; the first, or "premier vaccin," with a highly attenuated virus; the second, or "deuxième vaccin," with one less attenuated; and he has enthusiastically prophesied an extension of the principle to all infectious diseases. Dr. Loeffler of the Imperial Office of Hygiene, of which Koch is director, performed experiments with anthrax to test this question of immunity, and showed that in many infectious diseases inoculation does not confer immunity, but rather the reverse, and that in anthrax such immunity could not be conferred on guinea-pigs, rats, rabbits, or mice. Gotti of Bologna, Guillebeau, and Klein have all failed to produce that immunity. At the Berlin laboratory experiments have been made on these animals with virus in varying degrees of attenuation without succeeding in conferring immunity against non-attenuated virus; and recent experiments on horses at Paris prove that these animals are not protected by inoculation; whilst both Loeffler and Jarnowski have given instances of human anthrax recurring in the same individual. It is only in sheep and cattle that marked immunity has been obtained, and M. Pasteur's application of this to the wholesale vaccination of flocks is well known. Koch has experimented upon such animals, and, although their number is few as compared with those operated on by M. Pasteur, his results deserve careful attention.

Prof. Koch asks his opponent for more precise directions as to the production of the attenuated virus, which M. Pasteur simply states to be produced by cultivating the anthrax bacillus in neutralised decoction, at a temperature of 42° to 43° C. for about twenty days. By that time the virulence is so attenuated as to be suitable for vaccination. Nor does Pasteur give any precise instructions as to the time needful to obtain the more virulent vaccine—that employed for the second inoculation. Koch has endeavoured to be more exact. He places a number of small bulbs, containing about twenty grammes of neutralised chicken infusion, infected with due precaution with the anthrax bacillus, and keeps the bulbs in a chamber maintained at a constant temperature of 42·5° C. Every two days mice, well-grown guinea-pigs, and large rabbits are inoculated with the fluid from a bulb, another portion being used for culture in gelatine. At first all the animals die of anthrax; then, at the end of a certain but variable time, some of the vaccinations fail to kill the rabbits, but are still fatal to the mice and guinea-pigs. Later still the latter resist the inoculation, the mice alone dying; and finally a stage of cultivation of the bacillus is reached when it is no longer noxious to mice. Morphologically the innocuous bacilli are indistinguishable from the virulent ones. The cultures which kill the mice, but fail on guinea-pigs, form the best material for primary vaccination of sheep; those which give anthrax to the guinea-pigs, but not to the rabbits, are suitable for the second vaccination. He doubts whether M. Pasteur is cognisant of these signs of attenuation, for using some of Pasteur's "premier vaccin" he found it too weak to kill mice, whilst his "deuxième vaccin" gave rabbits anthrax, and was consequently too powerful. He mentions Klein's experience with some of Pasteur's "premier vaccin" which killed three guinea-pigs out of four and six mice that were inoculated with it, showing that it was too strong; whilst, on the other hand, of twenty-six sheep vaccinated in Hungary with the "deuxième vaccin," without having been previously protected by the primary inoculation, none suffered, showing that the material used was too attenuated. He points out that attenuation is much influenced by temperature; the nearer this reaches 43° C. the more rapidly is the virus rendered powerless, so that it may be thoroughly attenuated within six days; whilst at a temperature of 42° C., it may require thirty days to be so affected. Preliminary trials on mice, guinea-pigs, and rabbits should always be made, for the vaccine gradually loses its virulence at ordinary temperatures. He insists on the pure culture of the bacillus in gelatine, in order to prevent adulteration of the vaccine with other bacteria, especially those which are known to produce septicæmia; and he has found, on microscopical examination, some of Pasteur's specimens of "vaccine" to contain numerous varieties of bacteria.

Koch's results of the vaccination of sheep with his own and with Pasteur's vaccine have yielded the following results. No effect has followed the primary vaccination; but upon the second vaccination a certain number died of anthrax. At Kapuvar, of fifty sheep inoculated primarily none died, but after the second vaccination five succumbed; at Packisch also, three out of twenty-five died after the second vaccination. From these and other returns Koch asserts that although the primary vaccination is harmless, the second is answerable for a mortality of 10 to 15 per cent., which Pasteur has endeavoured to explain by saying that the sheep in question belonged to a kind peculiarly apt to contract anthrax. Koch, however, refers to a recent report of M. Mathieu to the Société Centrale de Médecine Vétérinaire, giving numerous losses from such vaccinations; and although thousands of animals have been vaccinated in France without loss, such vaccinations have not been tested by control experiments, and there is no proof that the virus was not too weak, and therefore incapable of conferring immunity. In the second series of vaccinations at Packisch, where 251 sheep were dealt with, only one died, the vaccine

furnished by M. Pasteur being, as he stated, less powerful. In order to test the preventive powers of the vaccination, Koch inoculated six sheep which had been vaccinated with M. Pasteur's vaccine three weeks previously; one died from anthrax. Two other sheep, vaccinated from another source, were proof against the disease. Similar control experiments, made at Packisch on twenty-two sheep, and at Kapuvar on forty-four, were followed by but one death in each instance; and the contrast between this and his own results Koch explains by the fact that the anthrax virus used at these places for the experiments was obtained from M. Pasteur himself, and was probably less virulent than that which he (Koch) had used. He cites, further, a trial where of twenty-two vaccinated sheep three died from the second vaccination; and yet of the others, which might be supposed to have received immunity, two out of ten inoculated eight weeks afterwards with blood from a sheep dying of anthrax also died of the disease. Bassi, of Turin, found out of twelve vaccinated sheep that six subsequently inoculated with the non-attenuated virus supplied by M. Pasteur survived, whereas of six others inoculated direct from an animal dying two hours and a half previously from anthrax, two contracted the disease. He explains these results by inferring the virus of M. Pasteur having lost some of its power, just as the vaccine is known to do by keeping.

Such results prove that, in spite of a powerful second vaccination, sufficient to kill some of the sheep, perfect immunity was not conferred; and this renders it likely that with a weaker "deuxième vaccin" a less immunity would occur. M. Pasteur states that up to the beginning of September 400,000 sheep and 40,000 cattle had been vaccinated in France, and reckoned the loss of sheep at 3 per 1000, and of cattle at 0·5 per 1000. Such figures only show how many animals have withstood the effects of vaccination, which is not equivalent to the conferring of immunity—the real point. "What," says Dr. Koch, "would one have said of Jenner if he had not been able to boast of better results obtained by the inoculation of vaccine than that, having vaccinated thousands of infants, he had lost only so many per cent. from the results of the vaccination? Certainly, nothing would so rapidly popularise anthrax vaccination as the enumeration of thousands of animals known to be saved from anthrax. Hitherto M. Pasteur has not produced any such evidence. On the contrary, for some time past complaints of failures have been multiplying, and the weak points of the practice are becoming more manifest."

M. Pasteur appears to have admitted that many failures had occurred, which he explained by the original vaccine losing its strength; but he nevertheless includes all such cases in his list, which may account for the low rate of fatality following his numerous vaccinations. He stated, however, that since March a new supply of more effective vaccine had been employed; and Koch gives facts which tend to show that the mortality following these later vaccinations was considerable in some cases, and slight in others, quoting, amongst other instances, one which was remarkable as showing how little dependence can be placed on the method. At Montpellier, on April 13th, a first inoculation of a flock of sheep was performed; nine sheep died. On April 28th the flock was again inoculated with the "premier vaccin," and seven died. Secondary vaccination on May 17th was followed by the loss of one sheep. In spite of this triple vaccination, six sheep of the flock died from anthrax from June 11th to 13th. Thereupon the remainder were again submitted to secondary vaccination, and five sheep died. "After that," adds Koch, "it is allowable to ask if there really is such a thing as artificial immunity, or if the vaccine was of any value at all."

M. Pasteur seems to have felt the difficulty in which he was placed—viz., if a vaccine strong enough to confer protection were used, too many animals die from the effects of the second vaccination; but if the vaccine be too weak, then protection was not afforded; and to get out of this dilemma he averred that protection from anthrax acquired through feeding was obtainable by a less powerful vaccination than protection from the effects of the direct inoculation of anthrax. He gives no arguments in support of this arbitrary assertion, and he ought to have proved it before introducing preventive vaccination into practice with the losses it entails. For if it should turn out that the vaccinated animals enjoy immunity against artificial infection, and not against natural infection, the utility of vaccination remains to be shown.

(To be concluded.)

REPORT OF THE MEDICAL OFFICER OF THE LOCAL GOVERNMENT BOARD, FOR 1881.

[SECOND NOTICE.]

IN continuation of our notice of Dr. Buchanan's last annual Report we would next refer to an inquiry which was carried out under the supervision of Dr. Robert Cory, mainly with a view of ascertaining how far some of the processes in common use among chemists for the analysis of water could be relied on to detect dangerous pollutions. Experience has shown that filth as such is not necessarily capable of producing disease, and that a vast amount of water is in use which contains so considerable a quantity of organic matter as to lead to its condemnation from a chemical point of view, but which is apparently consumed without any obvious effects on health. On the other hand, it has been strongly contended that waters which, when subjected to the most refined methods of analysis, only give indication of so small an amount of organic impurity as to place them amongst the class of waters which are chemically regarded as of a very high order, do as a matter of fact lead to the diffusion of much fatal disease. With a view of throwing further light on this subject, Dr. Cory's inquiry has been instituted, and both his Report and the comments which are made on it by Dr. Buchanan are worthy of the most careful study.

The principles held in view during the course of the inquiry are well indicated by Dr. Buchanan, who points out that "there is nothing in the nature of things that constitutes a grain, or a fraction of a grain, of organic matter, vegetable or animal, into an indication of wholesomeness or unwholesomeness, because it occurs in a gallon of water," and who goes on to point out that if we could be certain that the waste products which contaminated water were only derived from healthy bodies, we might, perhaps, run no serious risk in drinking such stuff as is drawn from the Holy Well at Mecca, and which yields on analysis "nearly six times as much animal matter as is found in the same volume of strong London sewage." But, on the other hand, we are clearly reminded that with advancing knowledge as to the power of water-supplies for harm, we have come to learn that "among animal impurities of a nasty kind, one differs very much from another in its power to give a morbific quality to water," and what we now most want to know is whether chemistry can or cannot tell us whether an organic pollution is or is not of a dangerous quality, and whether pollutions can still be dangerous to water consumers if too small in amount to be identified by the chemist. Having such ends in view, samples of water have been taken and divided into two portions. One has been left untouched, to the other has been added such polluting matters as portions of healthy stools, urine, blood, serum, and also typhoid stools. Both samples have been forwarded to well-known chemists, such as Dr. Dupré, Dr. Frankland, and Mr. Wanklyn, for the purpose of analysis. Each experiment is recorded in detail by Dr. Cory; in every instance the analytical results, as regards both the polluted and the unpolluted waters, are given, and at times the microscopical appearances of the sediment are sketched in lithographic drawings. We can, however, on the present occasion only refer to the more general conclusions which were arrived at.

One of these in no way surprises us. It is found that, as regards all the chemical processes put on their trial, there is nothing in the customary methods of water analysis which enables the chemist to distinguish between a water that has been intentionally polluted with the stools of patients suffering from typhoid fever, and one containing only some portion of a healthy stool. This fully confirms the experi-

ments of Dr. Frankland, to which we have on previous occasions drawn attention, and which were to the effect that when he mixed choleraic discharges with certain waters he was unable to detect anything which gave even an indication of the specific character of the pollution. With reference to the various chemical processes which were adopted, it is pointed out that the one which is most popularly trusted for the recognition of animal impurity, is that which gives information as to the amount of "albuminoid ammonia" yielded by the water, and therefore to this process special prominence is given. Typhoid stool was added to a sample of water, in the proportion of one grain to the gallon, and it was forwarded to Dr. Dupré, the average of whose analyses of the sample in question indicated that all he could discover as the result was an increase of fourteen thousandths of a part per million parts, as compared with the same water to which no polluting matter was added. Mr. Wanklyn is, however, the chemist by whom the albuminoid ammonia process has been specially developed, and therefore a particular sample of water, purposely contaminated with the filtrate from 3·5 grains of typhoid fever stool to the gallon, was submitted to him, along with a specimen of the same water not contaminated. All that was detected as the result of the pollution proved to be ·020 part per million for the 3·5 grains; that is to say, ·0057 part per million for each grain of the contaminating stool added to the gallon of water. And yet it is Mr. Wanklyn himself who tells us that water yielding up even to "·05 parts of albuminoid ammonia per million," falls within his Class 1, as a "water of extraordinary organic purity"; and even with double the amount, that is to say, an amount varying from 0·05 to 0·10 parts per million, water may, he believes, be regarded as "safe organically." With a view to the practical application of the important information elicited, Dr. Buchanan refers to the serious epidemic of enteric fever in and near Caterham and Redhill, which in 1879 caused over 350 attacks amongst a population who used the water from a deep well belonging to the Caterham Waterworks Company, the immediate cause of the outbreak being a contamination of the contents of the well with the discharges of a typhoid fever patient. According to information which was obtained, it appears that 1,861,000 gallons of water were pumped from the well in the fortnight during which the water alone could have conduced to the spread of the contagion; and if this water had contained typhoid stool at the rate of one grain of excremental matter to the gallon, it would have been necessary that as much as nineteen pounds of excrement should have been added to each week's supply of water. That any such quantity was added is, of course, out of the question; but the comparison serves to show the extreme importance of the failure of the chemical process under consideration to detect an amount of specifically diseased pollution which we may judge was far in excess of that which sufficed to bring about the disastrous epidemic referred to. Indeed the conclusion arrived at must be that the chemist is not warranted in speaking of waters as safe or wholesome merely because of the amount of their chemical ingredients, and that the question of safety depends rather on the sources and the quality of possible pollutions, points which cannot as yet be dealt with in laboratory experiments in any such way as to be really helpful. The indications which chemistry can afford in the matter of water analysis are valuable in the extreme, and any positive evidence of pollution which the chemist can show should never be disregarded. As to negative evidence, however, the matter is different; we must "go beyond the laboratory for evidence of any drinking water being free from dangerous organic pollution."

A further point dealt with in this Report relates to Dr. Klein's researches into mutations of micro-organisms. These researches have, to a large extent, had reference to the specific bacillus of anthrax, in the cultivation of which it is found that greater importance attaches to the occurrence of spore formation than had hitherto been recognised. After several weeks of growth of the anthrax bacillus that organism is shown to undergo degeneration, and it has been a contention of M. Pasteur that during the process of successive cultivations an attenuation in the activity of the virus takes place, leading to the production of a modified attack of the disease when the virus is inoculated into the body of an animal. Dr. Klein, however, whilst noting the degeneration, apparently as the result of the exhaustion of the pabulum in which the bacillus had lived, finds that whenever any such altered virus produces any effect at all as the result of inoculation, it is just the same injury, and just the same fatal result as is induced by inoculation of the material before the degenerative process had set in. The change, it appears, is in the number of active bacilli, not in the potency of the several bacilli. The experiments on which this conclusion is based are given in detail by Dr. Klein, and they are of considerable importance in connexion with the discoveries of M. Pasteur. The investigation does not pretend to throw doubt on the discovery by Pasteur of some material by which sheep can be protected against fatal anthrax, but it is maintained that this material is not the result of an attenuation following on successive cultivations of the anthrax bacillus. Whatever diminution in virulence takes place is entirely due to a diminution in the number of active bacilli, never to a progressive weakening in the bacilli themselves, and so long as a single living bacillus remains, it is possible to start new cultivations which, on the formation of spores, kill without fail all rodents inoculated. In view of these experiments, Dr. Buchanan holds that the conditions for the production of Pasteur's anthrax "vaccin" have not transpired from the professor's laboratory.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns, 6244 births and 3757 deaths were registered during the week ending the 24th ult. The annual death-rate in these towns, which had been equal to 23·5 and 21·9 per 1000 in the two preceding weeks, rose again last week to 22·7. During the first eight weeks of the current quarter the death-rate in these towns averaged, however, only 22·7 per 1000, against 27·5, 25·0, and 25·3 in the corresponding periods of the three years 1880–1–2. The lowest rates in these towns were 13·6 in Brighton, 14·0 in Derby, 17·4 in Plymouth, and 17·9 in Bristol. The rates in the other towns ranged upwards to 30·5 in Hull, 31·7 in Blackburn, 31·9 in Bolton, and 32·3 in Wolverhampton. The deaths referred to the principal zymotic diseases in these twenty-eight towns, which had declined from 411 to 341 in the three previous weeks, were 345 last week, and but four above the exceptionally low number in the previous week; 80 resulted from whooping-cough, 79 from scarlet fever, 68 from "fever" (principally enteric), 44 from measles, 36 from diphtheria, 19 from diarrhœa, and 9 from small-pox. No deaths from any of these zymotic diseases were recorded either in Brighton or Plymouth, whereas they again caused the highest death-rates in Blackburn and in Hull. Whooping-cough was proportionately most fatal in Derby and Hull; scarlet fever in Birkenhead and Leeds; and "fever" in Birkenhead, Sunderland, Liverpool, and Blackburn. The 36 deaths from diphtheria in the twenty-eight towns included 18 in London, 3 in Nottingham, and 2 each in Portsmouth, Sunderland, Newcastle-upon-Tyne, and Cardiff. Small-pox caused 8 deaths in London and its suburban districts, and 1 each in Portsmouth, Hull, and Newcastle-upon-Tyne. The number of small-pox patients in the metropolitan asylum hospitals, which had been 97 and 95 on the two preceding Saturdays, declined to 88 at the end of last week; 11 new cases of small-pox were admitted to these hospitals during last week, against 18 and 15 in the two previous weeks. The

deaths referred to the diseases of the respiratory organs in London, which had been 390 and 401 in the two preceding weeks, declined to 366 last week, and were as many as 161 below the corrected weekly average. The causes of 113, or 3·0 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Nottingham, Bradford, and Cardiff. The proportions of uncertified deaths were largest in Wolverhampton, Leicester, Preston, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been equal to 28·8 and 25·8 per 1000 in the two preceding weeks, rose again to 27·4 in the week ending the 24th ult., and exceeded by no less than 4·7 the mean rate in the twenty-eight English towns. The rates in the eight towns ranged from 16·6 in Aberdeen to 32·7 and 33·3 in Greenock and Glasgow. The deaths in the eight towns included 106 which were referred to the principal zymotic diseases, showing an increase of 18 upon the number in the previous week; these deaths were equal to an annual rate of 4·5 per 1000, which was more than double the mean rate from the same diseases in the large English towns. Whooping-cough was again last week the most fatal zymotic disease in the Scotch towns, causing 56 deaths, or 10 more than the number in the previous week; these included 32 in Glasgow, 11 in Dundee, and 6 in Greenock. The 17 deaths referred to diphtheria showed an increase of 5 upon the number in previous week; 10 occurred in Glasgow, 4 in Edinburgh, and 2 in Greenock. All the 8 fatal cases of scarlet fever, and 8 of the 9 of measles, were returned in Glasgow. The 8 deaths referred to "fever" corresponded with the number in the previous week, and included 4 in Glasgow and 2 in Greenock. The 8 deaths attributed to diarrhœa were considerably below the average. The deaths referred to acute diseases of the lungs in the eight towns, which had been 164 and 165 in the two previous weeks, declined to 138 last week, but were 22 above the number from these diseases in the corresponding week of last year. The causes of 103, or nearly 16 per cent., of the deaths registered last week in the eight towns were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 34·0, 37·9, and 39·1 per 1000 in the three preceding weeks, declined to 35·7 in the week ending the 24th ult. During the first eight weeks of the current quarter, the death-rate in the city averaged no less than 33·6 per 1000, against 20·9 in London and 21·7 in Edinburgh. The 239 deaths in Dublin last week showed a decline of 23 from the high number in the previous week; they included 12 which were referred to "fever," 9 to whooping-cough, 1 to diphtheria, 1 to diarrhœa, and not one either to small-pox, measles, or scarlet fever. Thus 23 deaths were recorded from these principal zymotic diseases, against 31 in each of the two previous weeks; they were equal to an annual rate of 3·4 per 1000, against 2·0 and 1·8 from the same diseases in London and Edinburgh. The deaths referred to "fever," which had been 14 and 11 in the two previous weeks, were 12 last week, and equal to a rate very far exceeding that which prevailed from the same cause either in London or in Edinburgh. The 9 fatal cases of whooping-cough showed a considerable decline from recent weekly numbers. The death from diphtheria was the first recorded within the city since the beginning of the year. The causes of 27, or more than 11 per cent., of the deaths registered during the week were not certified.

THE SERVICES.

Surgeon-General R. Gilborne has been appointed to succeed Surgeon-General J. Sinclair as Principal Medical Officer to the Aldershot Division.

ARMY MEDICAL DEPARTMENT.—Brigade Surgeon George Whitla has been granted retired pay, with the honorary rank of Deputy Surgeon-General.

BENGAL MEDICAL ESTABLISHMENT.—Brigade Surgeon Robert Faure Hutchinson, M.D., to be Deputy Surgeon-General.

MADRAS MEDICAL ESTABLISHMENT. — Surgeon-Major Henry King, to be Brigade Surgeon.

ARTILLERY VOLUNTEERS.—4th West Riding of Yorkshire (Sheffield): William Jackson Cleaver, Gent., to be Acting Surgeon.

ENGINEER VOLUNTEERS. — 1st Gloucestershire: Græme Bisdée Fraser, Gent., to be Acting Surgeon.

RIFLE VOLUNTEERS.—3rd Durham (the Sunderland): Charles Henry Welford, Gent., M.D., to be Acting Surgeon. 2nd Lanarkshire: Acting Surgeon John Millar resigns his appointment. 1st London (the City of London Rifle Volunteer Brigade): Frederick St. George Mivart, Gent., to be Acting Surgeon.

ADMIRALTY.—Fleet Surgeon John Money Shaw, C.B., has been promoted to the rank of Deputy Inspector-General of Hospitals and Fleets in Her Majesty's Fleet, with seniority of 16th ult.

The following appointments have been made:—Staff Surgeon James Dunlop, to the *Opal;* Surgeon Edward J. Biden, to the *Opal;* Surgeon Edward A. Lucas, to the *Forester*, vice Biden.

Correspondence.

"Audi alteram partem."

"THE TREATMENT OF AORTIC ANEURISM BY THE JOLIFFE-TUFNELL METHOD."

To the Editor of THE LANCET.

SIR,—I see by a leading article in to-day's LANCET that what I said on the subject of aortic aneurism at the Medico-Chirurgical Society on 13th February, conveyed a meaning rather wider than was intended. The subject is one of some importance, and I therefore ask to put myself more clearly. I was speaking only upon the question of the *cure* of aortic aneurism. A post-mortem experience of between fifty and sixty cases has shown me what, no doubt, has been evident to others, that an aortic aneurism is practically incurable. A cured aortic aneurism is exceedingly rare; and I believe that the impression has got abroad that they are more common than they are, from the practice of mounting in museums aneurismal sacs containing clot as cases of cure. But, as Mr. Henry Morris said, clotting in the sac is a long way from cure, and there may be plenty of clot and the patient die all the same from the persistent growth of the aneurism; sometimes even, as happened to me only the other day, by the extension of the sac even where the clot is thickest. Clot in the sac is by no means an unmixed good; many are the cases in which, by softening and inflammatory changes, it directly leads to death.

In so far, then, as we aim at a *cure*, we are *overtreating* the patient. This would be of no matter if the method adopted were easy and painless; but it is surely otherwise when it involves hardship and misery. There can be no doubt that the treatment of aneurism by spare diet, bleeding, &c., is all this to many men; the best evidence of it being that many will not submit to it, and leave the hospital. But I am far from saying that the treatment which goes by Mr. Joliffe Tufnell's name is valueless. To do so would be to show a contempt for the opinion of the most enlightened physicians of the day, which would be very inappropriate on my part. It would not accord with my own experience either, for assuredly the whole treatment of aneurism must be planned on such or similar lines. But I do believe that this treatment has its limits, and that these limits have been overstepped in recent times, with the result, in many cases, of embittering the patient's last days without any equivalent of gain. I should roughly divide aortic aneurisms into two groups: small ones, which rupture and terminate fatally, without giving rise to symptoms; and large ones, which often go on a long time, whether they are treated or whether they are not. I doubt if the long course these larger sacs run is thoroughly appreciated; and the tendency of the practice of the present day seems to me to be to subject them at once to rigorous treatment, and what for? To obtain a cure; a result which is not to be reckoned upon. Many will say, "No, not with the idea of cure, but with the hope of quieting the circulation, favouring coagulation, and thus

hindering the extension of the sac." I do not take quite the same ground as this; but so long as amelioration is the object in view, any treatment is legitimate, no matter what its hardship, if we are convinced of a fair chance. I should rather say that the scope of the Joliffe-Tufnell method lies in the attempt to relieve symptoms, such as pain, or the rapid growth of the sac, or urgent pressure; and all the relief we are likely to get from such measures will be obtained, if at all, in the course of weeks, not of months. For the rest, aneurisms of the aorta are much on a par with aortic regurgitation with dilated heart. Such cases are not necessarily kept strictly to their beds, because they are likely to drop dead some day. They are cautioned as to their mode of living, and symptoms, as they arise, are combated, if possible, and we cannot do more. Aneurisms are perhaps more sure of progressive development than the just-named cases, but they are equally incurable; and the same principle applies: unless there are symptoms calling for it, a rigorous treatment is bad practice. I do not admit the validity of the criticism that the post-mortem room is not the place to look for cures; but were I to do so there are few diseases, perhaps none, in which it scores less; for the disease which leads to aneurism is seldom confined to the one patch; and we have most of us seen cases where while one aneurism is under treatment another has killed. The life history of aneurism can be studied with precision in the post-mortem room; and I am very sorry to say that an experience of this kind teaches that the clinical evidence, by which we suppose *cure* to be in progress, is worth very little. I really do not know what clinical evidence of the cure of an aortic aneurism I should consider sufficient. The amelioration of symptoms is certainly not enough for the doctor, though it may be for the patient. I am not discussing the whole subject of the treatment of aneurism, and therefore make no mention of drugs; but it is obvious that my remarks do not apply to them; for although it is still true that no cure is to be expected, yet their exhibition is attended by no suffering, and the relief to some of the painful symptoms, particularly by large doses of iodide of potassium, is one of the most notable achievements of modern practice.

I am, Sir, your obedient servant,

Feb. 24th, 1883. JAMES F. GOODHART.

To the Editor of THE LANCET.

SIR,—Your leading article of the 24th inst., commenting on a discussion at the Medico-Chirurgical Society concerning innominate and aortic aneurism, contains this phrase:—"Mr. Barwell was inclined to look upon enforced rest in these cases as little short of a farce." Since that sentence entirely misrepresents not only my views and practice, but also my utterance at the meeting in question, I must request you to publish this communication. What I said and carefully limited was this:—"Treatment by rest, being often most beneficial though seldom curative, must always be fully and carefully tried; but in many cases aneurismal pressure on the trachea, on a bronchus, or on a recurrent laryngeal nerve, renders every breath a violent and protracted effort. Under such circumstances rest is an impossibility; and" (referring to the words of a previous speaker) "to talk of giving such a patient rest appeared to me little short, I will not, speaking of such grave matters, say of a farce, but of a fallacy." I have myself treated too many cases of innominate aneurism by rest, and have too often watched the benefit and the prolonged life procured by such means and by careful regulation of the heart's action, to speak or think in the sense which your article would assign to me. I am, Sir, yours very truly,

RICHARD BARWELL.

George-street, Hanover-square, Feb. 26th, 1883.

"THE FUNCTIONS OF THE SEMICIRCULAR CANALS."

To the Editor of THE LANCET.

SIR,—THE LANCET of February 17th experiments upon the ears of rabbits by M. Vulpian, which had for their object the further elucidation of the functions of the semicircular canals, and in your issue of to-day I see from your Paris correspondent a brief notice of further experiments in this direction. In all cases the experiments consisted simply in exciting acute inflammation in the tympana of the animals; and although your Paris correspondent says that many persons are in the habit of introducing into the ear a few drops of chloroform for the relief of earache or facial neuralgia, it is a proceeding not repeated often enough to form a habit, because if the chloroform passes on to the tympanic membrane it acts as an intense local irritant, causing instant acute pain and rapid ulceration of the membrane. Certain conclusions, presumably, are to be drawn as to the functions of the semicircular canals from the demeanour of the rabbits during their acute sufferings. Any such conclusions are based upon the threefold supposition that the functions of the semicircular canals are already partially established, that the demeanour of the suffering animals is much influenced by excitation of this part, and that acute inflammation of the tympanum produces such excitation. I venture to say that, at any rate, the latter two of these premises are open to question, and that therefore any conclusions drawn from them are liable to be most misleading. One would have supposed that more might have been learnt by observing the symptoms and movements of an intelligent man with acute inflammation of the tympanum (a not very rare spectacle) than from a rabbit, especially as the man may be interrogated as to his sensations of giddiness or other discomforts. The manner in which the semicircular canals are occasionally, so to speak, dragged out and promenaded is positively ludicrous. Every conceivable form of ear trouble is at times spoken of as Ménière's disease, because a few able physicians and surgeons who are most cautious and trustworthy in their observations recognise under this term a certain train of symptoms (amongst which is giddiness) as depending upon disease situated beyond the middle ear; and the reason for this eagerness to name what is imperfectly understood lies in the fact that giddiness is so common in many diseases of all three portions of the ear. Scarcely a day for many years, when at work, have I not on several occasions met with this symptom in connexion with ear disease, and I am sure that many hundreds of times I have noted it as markedly as was probably manifested in the rabbits. Am I to conclude that the semicircular canals are on these occasions always affected? In common with many others, I have learned to regard giddiness in ear disease as at times a grave symptom, at others as a most trivial one. Impacted wax will often give rise to it. Many persons with entire tympanic membranes are giddy on the most gentle syringing (most people if the water is not warm enough). Giddiness follows syringing in very many perforations of the membrane. It is present in most cases if a polypus causes pressure; in almost all rapidly progressive nervous diseases of the ear; in all inflammations followed by cranial complications and pyæmia; in most inflammations of the tympanum. Immediate giddiness and vomiting without premonitory nausea occasionally take place during syringing in perforations. (In the minds of some this might appear more like reflex action in branches of the pneumogastric than excitation of the semicircular canals.) I could multiply these examples almost indefinitely. Are the semicircular canals in these instances always excited? And are we to suppose that the movements of the eyes spoken of in the rabbit are due to the same exciting cause? Up to the present, in cases of acute inflammation of the tympanum the abnormal movement of the eye has been thought to be due to cerebral irritation, and if the patient dies of meningitis or cerebral abscess, this has been considered to be a sufficient cause. Lastly, let anyone who is familiar with animals read of the movements of the rabbits under agonising pain in the ear, and he will recognise their efforts to rid themselves of the unknown something which gives pain on one side of the head. He will also be struck with the marvellous similarity between the tumbling movements of the rabbit when chloroform is poured in its ear, and when it receives one or two small shots in the head as it is running. If he has seen many patients suffering during acute inflammation of the tympanum, he will also be struck by the similarity of the attitudes which the man and the rabbit assume, and he might learn from the man, if not from the rabbit, that although giddiness is often experienced, such positions are not all of them due to any loss of power in maintaining the equilibrium. I need perhaps scarcely say that these observations are not intended to reflect on the general question of vivisection, but rather to point out how readily the effects of cerebral irritation are in danger of being

ascribed to an altered function, about which up to the present very little is known, though much has been written.

I am, Sir, your obedient servant,

Savile-row, W., Feb. 23rd, 1883. W. B. DALBY.

"CONSCIENTIOUS OBJECTIONS TO VACCINATION."

To the Editor of THE LANCET.

SIR,—Though no sane medical practitioner doubts that vaccination, properly performed, prevents, or, failing this, modifies small-pox, it cannot be denied that for most of us the grounds of this belief are historical and deductive, rather than actual and positive. Thanks to the sagacity of our fathers, we seldom see the "dire effects" of unmodified variola. Occasionally, however, an instance does occur where the disease has been allowed to inflict ravages on its victim free and uncontrolled. Such a one I have met with to-day. A child, aged five years, was brought to me at the Moorfields Eye Hospital for advice. The features were hideously deformed by dense and deep cicatrices of keloid character, and both eyes were irrecoverably destroyed. The case told too plainly its own story. Last August the child had small-pox. It had never been vaccinated because, in the mother's sorrowful words, "the father objected." But this is not all. The mother had herself never been vaccinated, and was deeply "pitted" from small-pox in childhood; the father had been vaccinated, and he had not contracted small-pox. There are three children, aged respectively nine, six, and five years. Only the second child has been vaccinated, and she alone has not had small-pox. The eldest child was attacked in August, and is now deeply scarred; the youngest child is my patient. Thus of five members of a family invaded by small-pox only two had been vaccinated, and only these escaped. Of the remaining three one had already had small-pox, and all are more or less disfigured, and one is totally blind. It may be further worth recording that the mother spontaneously ascribed the facility with which the father had eluded the vaccination regulations to the circumstance that in her first and last confinements she had a midwife, whereas in her second she was attended by a medical man.

These facts suggest many reflections, but scarcely need any special comment. I am, Sir, yours truly,

Harley-street, Feb. 27th, 1883. JOHN TWEEDY.

SCOTTISH NOTES.

(From our own Correspondent.)

DR. ADAMS, Medical Superintendent of the Crichton Royal Institution and Southern Counties Asylum, Dumfries, has placed his resignation in the hands of the Board, and the assistant medical officer and matron have taken the same course.

SANITARY INSPECTION AT GREENOCK.

The Fates apparently intend to use Greenock in exemplifying all the difficulties which can possibly occur in the sanitary management of towns. Some cases of typhus fever have recently occurred in that town, but, as several notifications of various simple forms of fever had been made, it would appear that the officials did not accept the diagnosis of the medical attendants, and proceeded to the houses of the patients, that they might judge for themselves. The sanitary inspector had no difficulty in diagnosing typhus! This is surely an excellent example of how not to do it.

LEITH IMPROVEMENT SCHEME.

An important arbitration with regard to the improvements proposed at Leith has just been concluded there. The total claims lodged amounted to about £90,000, and the amount of the award is £61,519. The amount of demolition to take place is not fully shown by this statement, as many dilapidated properties have been purchased privately.

GYMNASTICS IN SCOTCH UNIVERSITIES.

A successful exhibition by the members of the St. Andrews Gymnasium would be scarcely worthy of note were such occurrences more common in the north, but in the face of a general apathy regarding such exercises in our universities, it is well to show that the least of these can give good results when properly encouraged. The social element is that which is most needed in Scottish university life, and in this respect, as well as for more obvious reasons, gymnastic exercises demand greater attention than they usually receive here. Excepting at football, the coarsest of all outdoor games, our students do not show to advantage in sport, and the indifference of the authorities is the sole reason for the students' discredit.

FOOT AND MOUTH DISEASE IN CATTLE.

About a fortnight ago an outbreak of this farmer's pest originated amongst a small lot of cattle brought from Dublin to Edinburgh, and already there is scarcely a county in Scotland in which its appearance has not been recorded. The loss to the farming and food-producing interest is immense, but it has other concern for the profession if the disease can be conveyed to our patients by the milk or flesh from the diseased animals. The teaching of the veterinary profession on the point seems to be that if the vesicles which are so conspicuous in the mouth and betwixt the hoofs are also found on the teats or their lining membrane, the milk may be deleterious, though few cases have been recorded. To boil the milk, and afterwards to allow it to cool, or to add salicylate of soda, are the methods of treatment in conspicuous cases. Mention is made of milk which becomes possitively thick from deterioration, and probably medical men will agree in condemning *in toto* the use of any such food under any circumstances. The prompt action of the various local authorities at this crisis is truly commendable, and proves that when the pockets of farmers, and not the lives of their children or dependants, are at stake, decided means will be taken to stay the ravages of infectious diseases. There has probably been more money spent during these two weeks with the object of staying this serious though non-fatal disease, than has been paid during the century throughout Scotland to get rid of the most serious epidemics affecting man. By the way, I have heard of no proposal to enforce notification on the veterinary surgeon in these cases. The proposal, when property is at stake, is too roundabout.

NEW FEVER HOSPITAL FOR UPHALL.

A felt want in this district has been generously met by Mr. and Mrs. Bell, who at their own cost have provided for the treatment of infectious diseases by handing over to the local authority an admirably adapted hospital.

IRELAND.

(From our own Correspondent.)

METRIA, OR THE SO-CALLED PUERPERAL FEVER.

DR. ATTHILL, late Master of the Rotunda Lying-in Hospital, Dublin, last week read a paper on this subject at a meeting of the Academy of Medicine. He was of opinion that there was a form of puerperal fever, not septic, due to erysipelas, scarlatina, typhus, &c., and which spread like zymotic disease. He detailed an account of an epidemic of puerperal peritonitis, which took place last September in the Rotunda Hospital, when of eleven patients attacked nine died. No treatment was of avail, and the hospital had to be closed for a time, and thoroughly disinfected before patients could be admitted with safety. Dr. Atthill believes that puerperal septic fever is not communicable through the medium of the lungs. The various theories in reference to metria are so conflicting that if this suggestion of Dr. Atthill's as to an existing non-septic form be correct, it must necessarily tend considerably to simplify our prognosis and treatment of a very serious malady.

CORK OPHTHALMIC AND AURAL HOSPITAL.

This hospital may be said to be almost self-supporting, as the subscriptions last year did not pay the ordinary establishment expenses. There were 1518 patients treated, of whom 208 were received into the wards; and since the hospital was opened in 1868, 22,161 patients were attended to, necessitating the performance of some 5000 special operations. Although anæsthetics have been constantly administered, yet not a single death has taken place from their use. The hospital commenced with only six beds, but there are

now thirty available, besides those in the new cottage home wards. The close connexion existing between ear and throat affections necessitated the establishment of a special throat department, which has been in operation during the past twelve years. The clinical advantages of the hospital have been largely used by the students of the Cork School of Medicine, to whom free access has always been afforded.

NATIONAL ORTHOPÆDIC AND CHILDREN'S HOSPITAL, DUBLIN.

Last year there were 1513 new cases, either admitted to the wards or relieved at the extern department. The surgical operations performed included excision of the knee-joint, operations of osteotomy for genu valgum, fracture of bones of the legs for rickets, operations of tenotomy in the various forms of talipes, phimosis, &c. It is satisfactory to learn that the debt incurred in the purchase of the hospital premises has been cleared off, and that the distribution committee of the Dublin Hospital Sunday Fund have recognised the advantages of improved nursing in the hospital by increasing the annual grant.

NEW YORK.

(From our Correspondent.)

I ATTENDED the special meeting of the Medical Society of the County of New York on the 29th ultimo, which was convened for the purpose of deciding whether the "New Code" adopted last year, which permits the allopathic physician to meet in consultation his brother of the homœopathic persuation, should be cancelled or maintained. About 300 members were present, and every seat in the lecture hall of the College of Physicians was occupied. The special feature of the new code which was the subject for discussion was the following rule governing consultations:—"Members of the Medical Society of the State of New York and of the Medical Societies in affiliation therewith may meet in consultation legally qualified practitioners of medicine. Emergencies may occur in which all restrictions should, in the judgment of the practitioner, yield to the demands of humanity." This clause of the new code, it may be observed, makes no reference to any particular school of medicine, and on the face of it presents no objectionable feature; that two legally qualified practitioners should meet in consultation appears perfectly justifiable and calls for no censure. To appreciate the full value of this clause it must be understood that the State of New York recognises the existence of all the ultra schools of medicine, permits them to teach their several dogmas and to issue diplomas to those thus initiated as legally constituted medical practitioners. The State gives no special authority to any school of medicine, and thus no "regular" school exists. The allopathist, homœopath, eclectic, &c., all stand before the public authorised to practise by diplomas of equal value and importance before the law. As I understand the case, in England the law recognises but one school of medicine, the regular allopathic system; this forms the only means of entrance into the profession. The barrier once passed, however, the holder of a diploma can take up with any system he may select, but a homœopathic diploma cannot be obtained. On the contrary, in the United States any half-dozen men can form themselves into a corporate body, and become possessed of the power to confer diplomas. They may teach anything they please, or can confer degrees without any instruction whatever, and their diploma is just as good as that issued by the College of Physicians of New York. All presenting the same credentials, the American public have gradually lost special faith in the so-called regular school of medicine, and have given a large share of their patronage to the holders of dogmatic views, homœopaths, eclectics, electrics, or otherwise. Much of this loss of confidence has been incurred by the regular school of medicine by reason of their granting diplomas to half-educated boys, who are daily thrust upon the public, armed with all the powers of physicians and surgeons, without the necessity of having attended or seen a single case, and in Massachusets without the necessity of having studied an hour or passing any examination. It will therefore cause no surprise when I state that 157 medical practitioners voted to throw down the last frail barrier between themselves and the advertising quacks who rely on their own dogmas for public support. In vain such a man as Dr. Austin Flint, senior, raised his voice of warning, and reminded his hearers that under the old code the profession had prospered and become respected in the past; that those with whom consultations were now advocated constituted a body of men who held absurd dogmas, and who had organised themselves in opposition to the medical profession, taking a special name of their own, and practising with exclusive dogmas, which ignored the accumulated experience of the past. No regular physician can fraternise with such men, said he, and maintain his self-respect. The eloquence of Dr. Flint was in vain. One member who was cheered expressed a wish to abolish all codes of ethics and claimed perfect freedom of action. Practically, the majority of those present were of the same opinion, and but sixty votes could be secured, from a list of nine hundred members, for the maintenance of the separate individuality of the regular allopathic medical profession.

To-day the State Medical Society, at Albany, confirmed the action of the County Society, and declined even to appoint a committee to investigate and report in the matter. Thus, the medical profession of the State of New York have secured the freedom of action they desired, at the cost of being isolated from the American Medical Association, who will probably close their doors on the New York delegates at the next meeting, as they did at the last, for similar reasons.

I have endeavoured to learn, what is called here, the true inwardness of this movement. It is a pretended concession to the outsiders of the medical profession. My own opinion is, that so far from being a concession, the movement is an aggressive one—a forward march on the enemy's camp. "This is no question of drugs," shouted Dr. St. John Roosa, at the New York meeting. "No," whispered a physician who sat on my right, "Dr. Roosa is right, it is a question of dollars and cents."

New York, Feb. 10th, 1883.

Obituary.

HENRY CLIFFORD GILL, M.R.C.S., L.S.A.

"NATURE gives ability, what employment it shall find rests with fortune." This sentence from the master of maxims might well serve for epitaph for Clifford Gill. His ability was undoubted and was exceptional. The keen scientific faculty that he possessed was scarcely excelled by the thoroughness with which he took up and mastered successively the most varied pursuits. And yet, except to few, his name is all but unknown. Fortune had found employment for his ability in a bye-path which led away from the high road of his fellows; but among those he met on that path he was held in high esteem and sincere affection. The facts of his too brief life, scarce thirty-seven years, are few. Receiving his medical education at University College, where he obtained the gold medal in medicine, he held the office of house-physician at the hospital, and subsequently of clinical assistant at the Brompton Hospital. Chance led him to take up the care of the insane, and after a few months at Bethlem Hospital he became assistant superintendent at the North Riding Asylum, where he spent five years, when he succeeded to the sole charge of the York Lunatic Hospital, Bootham. Such a career in itself did not afford many opportunities for placing himself prominently before his professional brethren, but when occasion offered, as it did at the meeting of the British Association at York, he eagerly accepted the responsibilities of a position for which he was singularly well fitted, that of secretary and virtual manager of the Museum Committee; nor is it too much to say that much of the marked success of the meeting was due to the unwearied energy and skill with which Mr. Gill attended to this department. Only last year he filled the office of President of the York Medical Society, to which he on several occasions contributed papers of singular interest and power, dealing especially with some of the most abstruse pathological problems, on many of which he held views far in advance of his time.

He died on the 12th instant after a short illness. Exposure had brought on an attack of pleuro-pneumonia, which a spare frame and an anxious temperament were powerless to resist, notwithstanding every care that could be bestowed. His absence leaves in the minds and hearts of a few intimate friends a blank which is keenly felt. W. H. A.

MEDICAL NOTES IN PARLIAMENT.

Cheadle Lunatic Asylum.

IN the House of Commons on Friday, February 23rd, Dr. Cameron put a series of questions to the Lord Advocate and the Home Secretary as to the arrest at Glasgow, by an officer from Cheadle Lunatic Asylum, of Thomas Harrison, a former inmate of that institution, who was taken without a warrant and forcibly conveyed back to the asylum. The Lord Advocate replied that no complaint had been made to the Crown authorities, and it was a case for civil action. Sir W. Harcourt stated that the Lord Chancellor had no authority in the matter. The proper way to release the man would be by *habeas corpus*; but the report of the visitors of the asylum was that he was dangerous to himself and others. Dr. Cameron gave notice that he would call atttention to the subject.

Medical Examiners.

Mr. Gibson asked the Secretary of State for War whether the candidates for medical appointments in the army, navy, and India had to give their names and qualifications to the Board of Examiners instead of being known to the examiners by numbers only, as in almost all other public examinations; whether there was any member of the Board of Examiners with an Irish qualification or having any connexion with Ireland; and whether, having regard to the dissatisfaction and discontent which existed among Irish candidates as to the results of recent examinations, he would either have Ireland represented on the Board of Examiners or else take care that each candidate should only be known to the examiners by numbers. The Marquis of Hartington said that of the four examiners one was an M.D. of Dublin. No complaints upon the subject had reached the War Office; but the Government would consider how far it was desirable to substitute numbers for names.

Navy Sick Berth Staff.

Mr. Campbell Bannerman informed Sir H. D. Wolff that no decision had yet been arrived at regarding the pay and position of the Navy Sick Berth Staff. The whole system of attendance upon the sick, both in naval hospitals and afloat, was under consideration.

Glanders in the Bengal Cavalry.

Dr. Cameron gave notice of a question as to the want of inspection of glandered horses in the Bengal Cavalry embarked for Egypt, the death of an officer and two natives from glanders, and the inadequacy of the veterinary staff of the expedition.

Metropolitan Drainage.

Mr. Broadhurst gave notice that he will move for reports of the surveyors of the district boards on the drainage and roads of the metropolis, and also for a joint report in concert with the medical officer of health, of any street improvement suggested for improving the dwellings of the poor, of districts or areas to be condemned as unfit for human habitation, and generally as to the sanitary condition of areas under their supervision, with a view to their improvement, specifying in each case dwellings erected for the artisan class under the Peabody trust or companies engaged in providing dwellings for the artisan class, with suggestions for development.

Potatoes.

In the course of the debate on the Address on Wednesday, Mr. Blake, an Irish member, spoke upon the subject of distress in Ireland, and represented the condition of the people in parts of Connemara and Mayo as miserable in the extreme. They seldom tasted milk, or anything but bad potatoes. Doctors said that to get sufficient nourishment from potatoes alone a man must eat fourteen pounds a day, but unfortunately it was found to be impossible to eat more than five pounds a day.

Mr. P. A. Taylor gave notice of a question as to the compulsory vaccination of recruits.

The Army Medical Department in Egypt.

On Thursday, Sir H. Fletcher asked whether the Departmental Committee appointed to inquire into certain matters connected with the Army Medical and Transport Departments, during the late Egyptian campaign, had made their report; and, if so, whether the report would be laid upon the table of the House. The Marquis of Hartington said the Committee had not yet reported, but the Chairman, Lord Morley, had told him that the report would be made in a week or two. He would consider the question of its presentation to Parliament, but he did not apprehend that there would be any reason why it should not be presented.

Medical News.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—At a recent meeting of the Examiners the undermentioned was admitted a Fellow of the College:—

J. O'Donovan.

APOTHECARIES' HALL.—The following gentlemen passed the examination in the Science and Practice of Medicine, and received certificates to practise, on Feb. 22nd:—

Hubbard, Frederick Edmund, Guy's Hospital.
Lichfield, James William, West Kensington.
Llewellyn, Ernest Evan, Mile-end-road.
Maddison, Thomas Harwood, Osnaburgh-street.
Seymour, John Rusby, Stamford-street.
Sheppard, Henry Anderson, Southampton.
Stubbs, Robert Pickering, Sunderland.

The following gentleman also on the same day passed the Primary Professional Examination:—

Williams, Morris J., St. Bartholomew's Hospital.

MISS RAWSON, of Nydd Hall, has made a donation of 100 guineas to the Bradford Infirmary, partly in recognition of the valuable services rendered by the institution on the occasion of the fall of the chimney at Newlands Mill.

PRESENTATION.—Mr. James Callender, M.B., Dunscore, Dumfriesshire, has just been presented with a horse by some of his friends and patients, as a token of their appreciation of his work in the district during the last six years.

ROYAL INSTITUTION.—Mr. H. Heathcote Statham will give the first of two lectures on "Music as a Form of Artistic Expression," on Saturday, March 10th. The subject of Professor Tyndall's discourse on Friday, March 16th, is "Thoughts on Radiation, Theoretical and Practical."

HUNTINGDON COUNTY HOSPITAL.—The annual meeting of the governors of this hospital was held on the 20th ult., when a very favourable financial report was presented by the Committee of Management, which enabled the chairman, for the first time for many years, to report that the ordinary income of the hospital had proved sufficient to meet the current expenses of the year without trenching on legacies and donations designed for investment. The total receipts for 1882 amounted to £1963 19*s.* 10*d.*, and the expenditure to £1299 17*s.* 4*d.*

FROM the report of the Committee for Accounts and General Purposes, presented at the February sessions of Middlesex magistrates, we learn that Sir John Humphreys, coroner for the Eastern division, held 242 inquests from January 1st to Feb. 8th, at a cost of £386 8*s.* 6*d.*; Dr. Danford Thomas (Central), 201 inquests, at a cost of £397 17*s.* 8*d.*; Dr. Diplock (Western), 98 inquests, at a cost of £205 6*s.*; and Mr. St. Clair Bedford (City and Liberty of Westminster), from Jan. 1st to 31st, 37 inquests, at a cost of £89 4*s.* 6*d.*

PROVIDENT SURGICAL APPLIANCE SOCIETY.—It appears from the report recently read at the tenth annual meeting of this Society that upwards of 3000 surgical appliances had been distributed during the past year amongst the crippled poor. For some time past a difficulty had been felt in supplying the poor with artificial legs and arms, owing to the expensive nature of these articles, but this has been now overcome by procuring these appliances from France, at a cost not exceeding fifty shillings for a leg and foot, and thirty shillings for an arm or hand. At the close of the year a balance of nearly £190 was standing against the Society.

SEAMEN'S HOSPITAL.—The annual meeting of subscribers and friends of this institution was held on the 23rd ult. The committee reported that the number of patients under treatment in the hospital was 2396 in 1882, as compared with 2171 during 1881, and that 5118 out-patients had been relieved in 1882, against 4961 in 1881. The excess of

expenditure over receipts was £502. The Queen had again aided the funds of the hospital by her annual subscription of 100 guineas, while the Emperors of Germany, Austria, and Russia, the Kings of Italy, Netherlands, Portugal, and Sweden and Norway, as also several foreign Governments, had supported the institution with subscriptions. Special stress was laid on the fact that the hospital received no pecuniary support whatever from Government.

THE CITY DISPENSARY.—The ninety-fourth festival dinner in aid of the funds of this charity took place on the 23rd ult. The Lord Mayor, who presided, stated that 17,000 patients had been relieved during the past year, at a cost of £1500, and appealed for £600, which was necessary, besides annual subscriptions and aid from other sources, to carry on the institution during the year. Evidence of the efficiency of the dispensary was afforded by the fact that during the year the contribution to it from the Hospital Sunday Fund had been considerably increased. About £388 was collected during the evening towards the required £600.

HOSPITAL SUNDAY AND SATURDAY AT MANCHESTER.—Collections were made in Manchester on the 11th and 17th ult. in connexion with the Hospital Sunday and Saturday Fund. On the 11th ult. in the various places of worship £4635 5*s.* 8*d.* was contributed. The voluntary offerings of the *employés* in the city warehouses, works, and other business establishments on the 17th ult. have not, as yet, been fully handed in, but the amount forwarded to the secretary up to the 23rd ult. was £1539 10*s.* 6*d.* So far therefore the total contributions are £6174 16*s.* 2*d.*, the total at the corresponding period of last year being £6226 18*s.* 7*d.*

KING'S COLLEGE HOSPITAL.—The annual meeting of this charity was held last week, when it was stated that the expenditure for the year (including the cost of drainage works) had been £15,659, while the total income had only been £10,063, leaving a deficit of between £5000 and £6000 to be paid out of capital. The legacies, which for the ten years ended Dec. 31st, 1880, averaged nearly £6000 a year, amounted in 1882 to only £1984. The committee earnestly appealed for increased support, to enable the benefits of the hospital, situated in one of the poorest and most populous neighbourhoods of London, to be extended.

LONDON PROVIDENT SANITARY ASSOCIATION.—The annual meeting of this Association was held on the 24th ult. The report stated that the total number of houses inspected for the first time during the year had been 362, and of that number 21, or 6 per cent., had been found to have their drains entirely choked up, with no communication whatever with the sewer, all the foul matter sent down the sinks and soil-pipes simply soaking into the ground under the basement of the houses. In 117 houses the soil-pipes had been found to be leaky, allowing sewer gas, and in many cases liquid sewage, to escape into the houses.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

BENNETT, STORER, F.R.C.S.Eng., L.R.C.P.L., L.D.S., has been appointed Dental Surgeon to the Middlesex Hospital, vice Turner, resigned.

BRAID, CHARLES, M.B., C.M.Ed., L.R.C.P., L.R.C.S.Ed., has been appointed Medical Officer to the Fifth District of the Cuckfield Union.

BRINGLOE, CAPEL WILLIAM, L.F.P.S.Glas., has been appointed Medical Officer for the Cradley District of the Bromyard Union.

BROWN, C. HAIG, M.B., C.M.Aberd., M.R.C.S., L.S.A.Lond., has been appointed House-Physician to St. Thomas's Hospital.

BICKLE, L. M., M.R.C.S., L.R.C.P., has been appointed Non-resident House-Physician to St. Thomas's Hospital.

CORY, WILLIAM GILLETT, M.D.Paris, L.S.A.Lond., has been appointed Medical Officer for the Fifth District of the Bedminster Union.

COSSHAM, M. RAYMOND, M.D., C.M. Aber., M.R.C.S., has been appointed Surgeon-in-Ordinary to the Cirencester Cottage Hospital.

COTTER, JEREMIAH, M.D., M.Ch. Q.U.I., has been appointed Senior Assistant-Surgeon to the North Infirmary, Cork.

FELL, W., M.A., M.B.Oxon., M.R.C.S., L.R.C.P., has been appointed House-Physician to St. Thomas's Hospital.

HINE, H., M.R.C.S., has been appointed Medical Officer for the Sixth District of the Beverley Union.

HOSKIN, THEOPHILUS, L.R.C.P.Lond., M.R.C.S., has been appointed Medical Officer to the Sixth District of the Hackney Union.

HULL, W., M.R.C.S., L.R.C.P., L.S.A.Lond., has been appointed Assistant House-Surgeon to St. Thomas's Hospital.

JACKSON, J. W., M.R.C.S., L.R.C.P.Ed., has been appointed Assistant House-Surgeon at the Sheffield Public Hospital and Dispensary.

LAYTON, HENRY A., L.R.C.P.Ed., M.R.C.S., has been appointed Assistant Medical Officer to the Cornwall County Asylum, Bodmin, vice F. C. Gayton, M.B.

LIPSCOMB, A. A., M.R.C.S., L.S.A.Lond., has been appointed House-Surgeon to the London Hospital.

MAYLARD, A. ERNEST, B.S., M.B.Lond., has been appointed Extra Dispensary Surgeon to the Western Infirmary, Glasgow.

MILTON, H. M. N., M.R.C.S., L.S.A.Lond., has been appointed House-Surgeon to St. Thomas's Hospital.

MONTGOMERY, SAMUEL, L.R.C.P., L.R.C.S.Ed., has been appointed Medical Officer to the Second District of the Poole Union.

OSBORNE, JOHN HENRY, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Southwell District and Workhouse of the Southwell Union, vice Calvert, resigned.

OWEN, S. HOLGATE, M.D., has been appointed Honorary Assistant Medical Officer to the Clinical Hospital for Women and Children, Manchester, vice H. Boddy, M.B., resigned.

PEARSON, CHAS. YELVERTON, M.D., M.Ch. Q.U.I., has been appointed Junior Assistant-Surgeon to the North Infirmary, Cork.

READ, GEORGE, L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer at the Hospital at Scone, N.S.W.

ROSE, JAS. MARMADUKE, M.B., C.M.Ed., has been appointed Honorary Physician to the Alfred Hospital, Melbourne, vice Willmott, resigned.

SAVILL, T. D., M.D.Lond., has been appointed Resident Accoucheur to St. Thomas's Hospital.

SCOTT, CHARLES C., M.B., C.M.Ed., has been appointed House-Surgeon to the Ayr Hospital.

SHEPPARD, W. J., M.B. & M.S.Dur., M.R.C.S., L.R.C.P., has been appointed Assistant House-Physician to St. Thomas's Hospital.

STIRLING, ROBT. ANDREW, M.B.Melb., L.R.C.P., L.R.C.S.Ed., has been appointed Honorary Surgeon to the Melbourne Hospital.

TENCH, C. H., M.D., L.R.C.S.I., has been appointed a Surgeon to the Reading Provident Dispensary, on increase of Staff.

TEEVAN, W. F., F.R.C.S.Eng., has been appointed Consulting Surgeon to the West London Hospital.

WELLS, A. E., M.B.Lond., M.R.C.S., L.R.C.P., has been appointed House-Surgeon to St. Thomas's Hospital.

WILSON, C. WILLIAM, M.B.Dur., M.R.C.S., has been appointed Surgeon-in-Ordinary to the Cirencester Cottage Hospital.

Births, Marriages, and Deaths.

BIRTHS.

BARLOW.—On the 23rd ult., at Montague-street, Russell-square, the wife of Thomas Barlow, M.D., F.R.C.P., of a son.

FAIRBANK.—On the 14th ult., the wife of William Fairbank, of Moulsey House, Windsor, of a son.

JAMIESON.—On the 20th ult., at Abbotsford-place, Glasgow, the wife of Dr. Jamieson, of a son.

MOUAT.—On the 4th ult., at Bangalore, India, the wife of Surgeon-Major Mouat, M.D., Army Medical Department, of a daughter.

NOLAN.—On the 28th ult., at Brighton, the wife of William Nolan, Esq., M.A., M.D., Surgeon-Major, H.M. Bombay Army, of a daughter.

PRINGLE.—On the 20th Jan., at Meerut, N.W.P., India, the wife of R. Pringle, M.D., Surgeon-Major in Her Majesty's Bengal Army, of a daughter.

ROBINSON.—On the 15th ult., at 12, Albion-street, Hull, the wife of Arthur H. Robinson, M.D., M.R.C.S., of a son.

MARRIAGES.

BOSWELL—MACCOLL.—On the 28th ult., at the Presbyterian Church, Kensington, Alexander Boswell, M.D., of Ashburne, eldest son of Major A. C. Boswell, Retired List, Bengal Army, to Janet Helen (Netta), second daughter of the late Rev. Dugald MacColl, of Kensington.

MURPHY—DAVIDSON.—On the 21st ult., at Trinity Church, Fort Bellary, Ceded Districts, Madras Presidency, F. H. S. Murphy, Surgeon, Army Medical Department, son of M. W. Murphy, Surgeon-General, Army Medical Department, to Eveline Constance, only daughter of Lieut.-Col. A. A. Davidson, A.K.C. & F.L.S., Madras Staff Corps, Bellary.

RIDLEY—WALKER.—On the 14th ult., at St. Stephen's Church, Dublin, George Peirce Ridley, L.R.C.S.I., to Clemens Josephine, daughter of the late James Walker, Esq.

DEATHS.

BACON.—On the 22nd ult., at the County Asylum, Fulbourn, Cambs., after a short illness, G. M. Bacon, M.D., M.A., Superintendent of the said asylum, aged 47.

CHRISTOPHERS.—On the 26th ult., at Westgate-terrace, South Kensington, John Crowen Christophers, F.R.C.S., aged 70.

DALY.—On the 24th ult., at the residence of his brother, Stretford-road, Manchester, Fredck. Herbert Daly, L.R.C.S.Ed., L.R.C.P.Ed., aged 28.

DUKE.—On the 13th Jan., at Meerut, India, the result of an accident, Surgeon-Major William Alexander Duke.

REID.—On the 25th ult., at Ashbury Dale, Torquay, James Reid, Surgeon-Major (Retired), Her Majesty's Madras Army, aged 85.

SIGSTON.—On the 20th ult., Joseph Teale Sigston, Surgeon, of Welburn, formerly of Leeds, aged 76.

UTTING.—On the 19th ult., at his residence, White Ladies'-road, Clifton, George Utting, M.R.C.S., aged 25.

WYER.—On the 23rd ult., at Whitechurch Canonicorum, Dorset, Surgeon John Wyer, Army Medical Department, Retired, Half-pay, 19th Regiment, in his 94th year.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

Medical Diary for the ensuing Week.

Monday, March 5.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Flower, "On the Anatomy of the Horse and its Allies."
ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.
MEDICAL SOCIETY OF LONDON.—8 P.M. General Meeting.—9 P.M. Dr. Broadbent will report Two Cases illustrative of the Successful Employment of the Cold Douche.

Tuesday, March 6.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ROYAL INSTITUTION.—3 P.M. Professor R. S. Ball, "On the Supreme Discoveries in Astronomy (the Law of Gravitation).
PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. The following specimens will be shown:—Hypertrophy of Ramus of Lower Jaw; Rheumatoid Arthritis; Fracture of Sternum; a Peculiar Process from the Fibula; a Sacculated Bladder; Sarcoma of Bladder (two cases); Sarcomatous Change in Uterine Fibroid; Columnar Epithelioma of Stomach; Disease of Bladder and Kidneys; Tumour of Bladder and Skull; Simple Ulceration of Bladder; Multiple Growths in Bladder; Bladder after Cystotomy.

Wednesday, March 7.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays, at 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Flower, "On the Anatomy of the Horse and its Allies."
ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Croonian Lecture: Dr. J. E. Pollock, "On Modern Theories and Treatment of Phthisis."
EPIDEMIOLOGICAL SOCIETY OF LONDON.—8 P.M. Surgeon-General John Murray, "On the Delhi or Oriental Sore."—Deputy Surgeon-General Joseph Ewart, "On the Causes of the Excessive Mortality among the Women and Children of the European Army of India."
OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown.—Inaugural Address by the President, Dr. Garrie.—Dr. Godson, "On Cases of Clinical Interest."

Thursday, March 8.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.
ROYAL INSTITUTION.—3 P.M. Professor Dewar, "On the Spectroscope and its Applications."
OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—8½ P.M. Dr. C. E. Fitzgerald, "On the connexion between Uterine and Eye Diseases."—Mr. Adams Frost, "On Pulsating Exophthalmos."—Dr. David Little, "On Sarcoma of Iris successfully Removed."—Mr. A. H. Benson, "On Paresis of Ocular Muscles after Diphtheria."—8 P.M. Living and Card Specimens.—Mr. J. E. Adams, "On Embolism of both Retinal Arteries."—Mr. A. H. Benson, "On Ophthalmoscopic Drawings."—Mr. Adams Frost, "On Double Pulsating Exophthalmos."

Friday, March 9.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Professor Flower, "On the Anatomy of the Horse and its Allies."
ROYAL COLLEGE OF PHYSICIANS OF LONDON.—5 P.M. Lumleian Lecture: Dr. A. B. Garrod, "On Uric Acid, in its relation to Renal Calculi and Gravel."
ROYAL INSTITUTION.—8 P.M. Professor G. D. Liveing, "On the Ultra-violet Spectra of the Elements."
CLINICAL SOCIETY OF LONDON.—Mr. Godlee, "On a Case of Fracture of the Radius and Dislocation forwards of the Ulna at the Wrist, in which the lower end of the latter bone was removed to effect reduction."—Dr. Pearson and Dr. Broadbent, "On a Case of Acute Necrosis of the Right Orbital Plate of the Frontal Bone, giving rise to Thrombosis in the frontal end of the Longitudinal Sinus, in the Cavernous Sinus, and Ophthalmic Vein."—Dr. G. Johnson, "On Picric Acid as a Test for Albumen and Sugar in the Urine."—Mr. R. W. Parker, "On a Contused Wound of the Thigh and Leg in a Young Child; gangrene of the limb; death."—Dr. Dyce Duckworth will exhibit (1) a Case of Remarkable Hardness of the Ears; (2) a Case of Rheumatismal Subcutaneous Nodules.—Dr. S. Mackenzie will show a Case of Subcutaneous Nodules without definite Rheumatism.

Saturday, March 10.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Mr. H. H. Statham, "On Music as a Form of Artistic Expression."

METEOROLOGICAL READINGS.

(Taken daily at 5.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, March 1st, 1883.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Feb. 23	30·80	W.	40	38	..	51	34	..	Hazy
,, 24	30·68	W.	40	39	..	53	33	..	Overcast
,, 25	30·73	W.	49	45	..	51	36	..	Hazy
,, 26	30·62	W.	40	39	..	48	37	..	Foggy
,, 27	30·45	N.W.	42	40	..	51	36	..	Foggy
,, 28	30·49	N.W.	49	48	..	56	39	..	Overcast
Mar. 1	30·38	N.E.	48	43	..	52	44	·10	Cloudy

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

SIGNS OF CONVALESCENCE IN TYPHOID AND SCARLET FEVER.

La France Médicale says that, according to a communication received from Dr. Chauffard, the occurrence of multiple superficial abscesses and that of polyuria are two signs of convalescence in typhoid fever. The *Lyon Médical* states that M. Manjot, in giving a description of an epidemic of scarlet fever at Belley, said the defervescence was always marked by an extraordinary slowness of the pulse. This slowness could not be attributed to a nervous or cardiac lesion, nor to the treatment or any toxic influence. It appeared on the fifth or sixth day, when the eruption began to fade, and continued during the desquamative stage until convalescence. The pulse fell to 44 and 46 for eight or ten days, and then slowly rose to 60. The slowing was a sign of near recovery.

THE EFFECT ON HEALTH OF THE USE OF ANILINE DYES.

To the Editor of THE LANCET.

SIR,—Speaking to a German gentleman to-day, I was informed that an agitation was on foot in Germany having for its object the suppression or limitation of the use of aniline dyes in the manufacture of articles of clothing. These dyes have been found to be highly prejudicial and even dangerous in some recent remarkable instances, and a strong feeling in opposition to their use has been set up in certain quarters, which is likely to take the form of what we should call Parliamentary action.

I should like to invite your powerful influence to raise a discussion on the subject in this country, where the use of these dyes is becoming so universal. My impression is, although I advance it with all humility, that a great deal of impaired health and unaccountable ailment may be traced to the use of clothing, especially under clothing, into the manufacture of which aniline dyes and their ingredients largely enter. Much was said some time ago about arsenical wall-papers and their prejudicial consequences, and seeing that aniline dyes are "fixed" with the same fatal poison, how much more serious must be the effect of a garment upon the wearer whose body is all day long in contact with its subtle and deleterious influence.

I am, Sir, yours obediently,

February 23rd, 1883. SUBSCRIBER.

"CONTAGION OF PHTHISIS."

To the Editor of THE LANCET.

SIR,—In the report in THE LANCET last week of my remarks at the Cambridge Medical Society on the above subject there is an error I should like to correct. In quoting from the statistics of the Brompton Hospital regarding the physicians and the assistant physician, instead of "out of 29, 8 died, but none of consumption," it should be "out of 29, 8 died, and one of consumption."

I am, Sir, yours faithfully,

LAURENCE HUMPHRY.

Trinity-street, Cambridge, Feb. 26th, 1883.

GASTROTOMY IN THE SEVENTEENTH CENTURY.

THE *Berliner Klinische Wochenschrift* of Feb. 12th contains a quaint account of a gastrotomy performed in the year 1635 at Königsberg. The subject was a countryman, who had six weeks previously swallowed a table knife seven inches long. Dr. Daniel Schwaben was the operator. He made an incision just below the left costal margin, exposed the stomach, and at once felt the knife; cut down upon it, and drew it out. The stomach wound at once contracted, and does not appear to have been sutured in any way. The wound in the belly-wall was sewn up and dressed with a complicated array of balsams, lotions, and compresses, in which we may recognise a blind and imperfect antiseptic dressing. With the exception of hæmaturia, the man recovered without any troublesome symptom.

Mr. J. W. J. Biggs.—We entirely agree in the view of the matter taken by our correspondent. The case was one for investigation. If the coroner thought otherwise, he should not have held an inquest or summoned the medical officer, who has been treated very badly.

"POST-PARTUM HÆMORRHAGE."

To the Editor of THE LANCET.

SIR,—Having read the very interesting correspondence on the above by Drs. Barnes and Vanes, I would ask a short space of your invaluable journal to submit a few observations on this important subject. My only excuse for trespassing on your space is that the following remarks may be of some practical utility to some of the junior members of the profession when engaged in the most trying circumstances in which any medical man can be placed. Having had only one fatality (from eclampsia) in nearly 3000 obstetric cases, it may be conceded that I have some practical experience; still I do not on this account consider myself entitled, nor do I for a moment pretend, to critise the very scientific communication of Dr. Barnes. In his hands the injection of warm water and salines in post-partum hæmorrhage may be conducted in such a manner as to rescue a patient from imminent peril, but if the inexperienced were led to use warm-water injections without knowing their kind and *modus operandi*, is it not possible that the patient might be thus deprived of all hope of recovery when more efficient and less dangerous remedies might be brought into requisition? It is my opinion that if warm water injected does not arrest hæmorrhage instantaneously, it encourages the bleeding; that its use, therefore, is objectionable in the hands of the unwary. If salines are to be used, of what kind should they be, and in what quantity, and how they are to be administered?

In glancing over Dr. Vanes' communication, it is impossible to doubt the skilfulness with which he treated his patient; but there are one or two points in such cases worthy of attention. In the first place, traction on the cord should never be practised while the placenta is in utero; and, secondly, we cannot hope to rescue a patient by washing away blood-clots with warm water. I am afraid the introduction of a bag, as described, is unscientific in theory, and would be disastrous in practice. Is it not the great aim in these cases to bring into complete action the ligatures of nature? If the uterus is kept forcibly dilated, the sinuses are deliberately kept patent, and the flaccid state of the uterine walls existing at such a time will not offer sufficient resistance to an internal compressible body, so as to arrest the fatal gush. Such remedies as kneading the uterus, ice, and perchloride of iron ought to be used in every case tending to fatal symptoms. I have seen fatal cases after the use of ergot, hot and cold water, kneading the uterus, and electricity in the hands of professors of midwifery. The most severe case of hæmorrhage I have recently had was a Mrs. H——, of Acre-street, Lindley, which occurred on the 8th of December, 1882. After the usual remedies had failed, I adopted (as I do in all extreme cases of hæmorrhage), first, a full dose of ergot, by which I mean two drachms of the liquid extract—serious diseases require strong remedies; secondly, I instructed an assistant to press on the abdominal aorta; thirdly, I introduced the hand, having closed it, made pressure internally, and with the other externally, with kneading; at the same time another assistant was directed to inject with a Higginson's syringe, by the side of the wrist, water as cold as possible, containing common salt in the proportion of four tablespoonfuls to the pint, into the fundus of the uterus, also into the rectum, where a quart was injected without intermission. The clots in the uterus can be scooped away with the internal hand, and the cold salt solution injected at the same time, the patient's pelvis meanwhile being raised, while the head rests at a lower level. In this case the most copious hæmorrhage I have ever seen was at once arrested. In this practice time is economised by giving at first a full dose of ergot, which can thereby take its therapeutic action while other means are being used. By using pressure on the abdominal aorta, the blood-supply to the uterus is arrested; while a due supply is kept up to the brain, and still more by the head being depressed, thus maintaining the patient's nervous contractile influence to the last. I take it that cold is one of the most powerful stimulants to uterine contraction, and, when combined with chloride of sodium, it is increased. As to the exact effect of chloride of sodium on the system, I do not give a fixed opinion; but I have thought that its good effects are produced by its local stimulating properties, and possibly by the absorption of some into the circulation. By these means vitality is maintained, which, to my mind, is the desideratum at a time when death may be only a few moments' distant. Brandy-and-water, suitably administered, is a most valuable adjunct.—I am, Sir, yours respectfully,

Lindley, Huddersfield, Feb. 17th, 1883. JOHN MAC CORMAC.

"PERSISTENT HICCOUGH."

To the Editor of THE LANCET.

SIR,—The letter of "M.D.," in THE LANCET of Feb. 24th, is of peculiar interest to me, as I have suffered myself from persistent hiccough at three separate periods of my life in a manner which the word "agony" will alone describe. The literature of singultus is, as your correspondent remarks, singularly poor. In vain have I looked for any reference to its pathology or therapeutics worthy of remembrance; yet the disease or symptom is far from uncommon either alone or as a complication in other disorders. When a student at Edinburgh University, Professor Alison told me that he had known it prove fatal, and that, when persistent, it was a most unsatisfactory thing to deal with. This was in reference to a dispensary patient. My own experience has been that no one remedy can be depended upon for a cure, but that a combination seldom fails. In my last attack I used first a three-ounce dose of strong infusion of mustard seed, followed in two hours by two-drachm doses of pure glycerine, taken every three hours. I also rubbed in warm laudanum and chloroform along the course of the phrenic nerve. In the case of a patient whom I saw in consultation some years since suffering from singultus, great relief was obtained from the hypodermic injection of morphia and by wearing a hot spinal compress. I have also heard of benefit from the use of the spinalice bag, alternating with heat.

Should "M.D." be pleased to favour your readers with the result of his treatment, he will confer an obligation on others as well as on your faithful servant, ED. SLADE-KING, M.D.

Croft-side, Ilfracombe, Feb. 26th, 1883.

To the Editor of THE LANCET.

SIR,—The case of your correspondent on the above subject forcibly recalls to me a case of a similar nature. The patient was an elderly gentleman in a good social position, and the least irritation or exertion would invariably bring on an uncontrollable attack of "hiccough." Its persistency and inveteracy resisted every mode of treatment. The cause of this was for some time most obscure, and gave rise to many hazardous and absurd attempts at a correct diagnosis by those who saw him. Soon, however, other well-marked and prominent symptoms revealed the development of cancer of the stomach, of which he ultimately died, the only initial and premonitory symptom being persistent hiccough. I found the remedy that afforded marked relief was ten minims of tincture of opium every four hours, and scrupulous avoidance of all saccharine articles of food.—I am, Sir, yours truly,

FRANCIS J. LEA, M.R.C.S. Eng.

Stratton-on-the-Fosse, Bath, Feb. 27th, 1883.

To the Editor of THE LANCET.

SIR,—I think "M.D." will relieve his patient of this distressing and serious affection if he will try the following treatment:—Hyoscyamine, $\frac{1}{15}$ gr.; arseniate of strychnine, $\frac{1}{15}$ gr.; bromhydrate of cicutine, $\frac{1}{5}$ gr. (the alkaloid of conium); every half hour till relieved, all three together. He will be able to obtain these alkaloids in the above doses in the form of little granules or pilules (which should be placed on the tongue and swallowed with a drink of water) from Messrs. Burgoyne, Burbidges, and Co., in little tubes containing twenty each, and will, I think, have reason to be satisfied with the result.—Yours obediently,

Spondon, Feb. 26th, 1883. B. WALKER.

To the Editor of THE LANCET.

SIR,—Replying to "M.D." as to treatment found efficacious for the above, I may mention that, in a case that came under my observation, after almost every known anti-spasmodic had been tried, a subcutaneous injection of a quarter of a grain of acetate of morphia, followed next morning by a lavement of cold water, together with an aloes and gentian pill, was tried. The spasm, which was of a most persistent character, very soon yielded after the hypodermic. It may be interesting to know that the patient was the subject of aortic valvular disease.

I am, Sir, yours truly,

Bristol, Feb. 27th, 1883. C. F. HAWKINS, M.R.C.S. Eng.

To the Editor of THE LANCET.

SIR,—"M.D." may, if his patient be not suffering from worms, find relief from administering a few drops of ether for his patient to inhale, and the following mixture prescribed:—Sulphate of ether, half a drachm (or one drachm); ipecacuanha wine, half a drachm; tincture of digitalis half a drachm (or one drachm); sulphate of magnesia, two drachms chloroform water, to six ounces. Two tablespoonfuls every four hours.

I am, Sir, yours truly,

February 24th, 1883. M.B. Aber.

To the Editor of THE LANCET.

SIR,—In reply to "M.D." on the above subject, I would mention that I have found a teaspoonful of mustard steeped in four ounces of boiling water for twenty minutes and strained cure two cases of persistent hiccough. The patient should drink the whole of the infusion at one draught. Has "M.D." tried hypodermic injections of morphia or inhalations of nitrite of amyl?—I am, Sir, yours truly,

London, S.W., Feb. 26th, 1883. J. EDWIN COONEY.

To the Editor of THE LANCET.

SIR,—A lady patient of mine occasionally suffers from violent attacks of hiccough. Internal remedies have been given without any benefit, but twenty drops of chloroform inhaled immediately stops the attack. If "M.D." has not already treated his patient with chloroform inhalation he will be agreeably surprised with its beneficial effects.

I am, Sir, yours truly,

Staines, Feb. 25th, 1883. PETER W. DE LA MOTTE.

COUNTRY PRACTICE.

LUCKLESS he whom Fates urge on
To practise as a country surgeon,
To ride, regardless of the weather,
Encased in waterproof and leather;
And oft at two points diametric
Summoned to render aid obstetric,
Or sent for to a broken limb,
When Lady Blank, with nervous whim,
Or some imaginary fever,
Calls him a savage if he leave her.
A day and night in some lone cottage
He shares the lowly labourer's pottage,
And kicks his heels with wearied brain,
Yet watching o'er the wife's slow pain.
And that task over, happy he
If e'er he gets the well-earned fee.
Now comes the night; with toil oppressed,
Tired he seeks his place of rest.
Vain hope! his slumber is soon o'er,
Loud sounds the knocker at the door.
A farmer's wife, at nine miles' distance,
Needs his immediate assistance.
Grumbling and groping in the dark
To find the matches for a spark,
And, yawning as he heaves his breeches,
Envies his neighbour who hath riches. E.

Mr. J. Dickson, M.B.—No address exactly corresponding to that in the bill is to be found in the Register. The College of Surgeons has the right of complaint in such a case. We should not recommend a private prosecution.

Mr. R. Owen.—The paper has, unfortunately, not been preserved.

SERIOUS COMPLICATION DURING PREGNANCY.

To the Editor of THE LANCET.

SIR,—I should be much obliged if some of my medical brethren would give their opinions of what should have been done in the following important case, which unfortunately terminated fatally.

On December 27th last, at 1 A.M., I was called to Mrs. H——, aged thirty-seven, the mother of eight children, seven of whom were born in India. I found her in a state of urgent dyspnœa; respirations 54 per minute, wheezing, and crepitant; pulse 130, and feeble. On auscultating the chest, sonorous, sibilant, and mucous râles were found extensively over the bases of both lungs; pulmonary resonance increased on percussion. The patient's husband stated that she had been suffering from a severe cough for about a fortnight previous, but did not feel any worse on going to bed about 11 o'clock on the night of Dec. 26th, and that a short time after having got to bed, she became faint and frightened, and begged of him not to leave her, as she thought she was going to die. He was obliged to knock on the wall to send a neighbour for me, as he could not leave her himself.

As the patient was in the last month of pregnancy—in fact, expecting her confinement daily—and seeing the urgency of the case, I called in another medical man, to whom I proposed the induction of labour, which he refused to sanction, as he said the patient was too weak, and would die in our hands. The project was therefore abandoned, and the usual remedies for bronchitis, including steam inhalations, persevered with. The patient gradually improved under treatment until Jan. 2nd, when the same urgent symptoms again set in, and the induction of labour was again proposed and rejected. These urgent symptoms again abated under treatment, and everything went on favourably until the 12th Jan., when the patient, after a short and easy labour, was safely delivered with forceps of a healthy female child. The placenta came away naturally, and the uterus contracted firmly, but the pulse continued high (120 per minute), and within half an hour after delivery the sputa, which before had been abundant, viscid, and tenacious, and at times streaked with blood, now became intimately mixed with blood. The urgent symptoms of dyspnœa again set in, and the patient gradually became worse, and finally sank on Jan. 14th, two days after the confinement. Should labour have been brought on, and, if so, whether at first or after the urgent symptoms had abated previous to the relapse?

I am, Sir, yours truly,

February 26th, 1883. A YOUNG PRACTITIONER.

A CAUTION.

To the Editor of THE LANCET.

SIR,—I think it right to publish the following facts and put my medical brethren on their guard. A tall, dark man, of fairly good address, called on me a few years ago to ask me for assistance. He stated that his name was Phillips, and that he was nearly related to two medical gentlemen of that name in practice in London. On inquiry I found that this was an oft-told tale, and that it was utterly false. The man took good care to leave the district before he could be found out, otherwise I should have given him in charge.

I am, Sir, yours faithfully,

ANDREW J. CURRIE, M.D.

Oakfield Villa, Lydney, Gloucestershire,
Feb. 28th, 1883.

"TRUTH THROUGH ERROR."

UNDER the above heading an American contemporary relates that a busy doctor sent in a certificate of death the other day, and accidentally signed his name in the space for "Cause of Death." The registrar says he wishes the profession would be as accurate generally.

Mr. Balbirnie might apply to Mr. Bonham Carter, Secretary to the Nightingale Fund, 91, Gloucester-terrace, Hyde-park. There are many institutions of the kind, but in all, or almost all, a fee is required.

A Subscriber to the Hospital.—The request for any correction in our statement should proceed from an official of the hospital.

E. W.—Certainly not. The title, though not registrable, is a real one.

M.B.—Such institutions are very objectionable.

W. W. W. has not enclosed his card.

VEGETABLE *versus* ANIMAL DIET.

To the Editor of THE LANCET.

SIR,—I forward you the result of an experiment I have just made. Last year about this time I determined to abolished fish, flesh, and fowl from my dietary, and see how I got on without them. I found at first that the ordinary vegetables, when eaten by themselves, were almost tasteless, and after a dinner consisting of them only I did not feel the satisfaction that I did after a meat meal. In the course of a few months my taste improved, and I learned to like them; and now I can eat them just as cooked. In the same way I have lost my taste for pickles, spices, pepper, and mustard; I still retain salt in small quantity. Now my meals satisfy me every way, and I do not experience the heaviness that I did after a meat meal. I used to suffer at one time from indigestion, but I have lost that since trying my experiment. I am very fond of mental work, and I find I can work better on my new diet. My bodily powers have not decreased, for I can run and walk as well as ever. Alcoholic drinks I have lost a taste for, and even the smell in some cases is disagreeable; the same with tobacco. My bowels are as regular almost as clockwork. I was constipated once only for a month, and that was because I was travelling and could not well get whole meal bread. I was threatened with rheumatism, and had rheumatic pains in my joints, but all those have gone. My urine was very often loaded with lithates, but now it is always clear and never deposits any; this has been so since a fortnight after beginning. It smells sweet at times, and occasionally has a mild, roast meat odour. I have gained about seven pounds in weight during the year. My diet consists of brown bread, fruit, and a cup of coffee for breakfast. Two vegetables, brown bread, and a pudding or pie for my dinner. Tea consists of a cup of milk-and-water, brown bread, and jam. If I eat supper I take a little bread and water, or bread and jam, cold pudding, or boiled onions. I do not eat peas, beans, or lentils above once a month. I do not eat more food as a non-flesh eater than I did as a mixed feeder. Butter, cheese, eggs, and milk enter sparely into my dietary. In the warm weather I eat more green stuff, and in autumn plenty of ripe fruit. My spirits are improved, and bad temper now rarely troubles me. My senses have increased in acuteness. I shall be pleased to give any information or willingly answer any queries.

I am, Sir, yours, &c.,

T. R. ALLINSON, L.R.C.P. Ed.

Kingsland-road, E., Feb. 16th, 1883.

Medicus.—The payment of the fees should be insisted on. If erysipelas followed vaccination, *a fortiori* it would have followed small-pox, and probably in an aggravated form. Study the sequelæ of small-pox.

Honestas.—The consultant ought in such a case entirely to decline taking the patient. We regret a week's delay in this answer.

Insana.—We have no disposition to question the appropriateness of the pseudonym adopted.

Gil Blas.—We regret that we cannot at the moment supply the information.

Mr. John Hart.—The announcement appeared in our last impression.

Dr. Campbell (Garlands).—Yes, if possible.

"TRUE KNOTS IN THE UMBILICAL CORD."

To the Editor of THE LANCET.

SIR,—Having just read in this week's LANCET the article on the above subject, I think the following rough notes may be interesting:—

On Dec. 10th, 1882, at 11 A.M., I was called to Mrs. J., a primipara, aged eighteen, a slightly built woman, height 5 ft. 2½ in. She stated that labour had commenced at 11 P.M. on the previous night. On examination I found the os dilated to about the size of a shilling, the head presenting. The pelvis was slightly contracted in the antero-posterior diameter. At 5 P.M. I was sent for again. At 6 P.M. the membranes ruptured, the amount of liquor amnii being rather below than above the average quantity. The labour was completed by natural efforts at 8.45 P.M., the head, however, not making the movement of "restitution," and the shoulders emerging in the transverse diameter. Midway between the child and the placenta was a knot in the cord, firmly, but not tightly, tied. The cord, which was a long one, was not atrophied; and as the child (a boy) was a fine, well-nourished baby, I imagine the knot must have formed during the labour. The tear in the membrane was central.

I am, Sir, yours faithfully,

February 10th, 1883. A CERTIFICATED MIDWIFE.

REGISTRATION OF MIDWIVES.

WE are asked to state that the address of the Hon. Secretary of the Midwives' Institute is 263, Vauxhall-bridge-road.

A Subscriber.—Certainly not. The charges should first be made to the person at fault, and if they cannot be explained or refuted, they should be made to the authorities of the hospital.

L.R.C.P. Lond.—Cassell, Petter, and Galpin have published a good work on the subject.

"THE PARCEL POST."

To the Editor of THE LANCET.

SIR,—Your annotation on the above subject puts forward some of the benefits it will confer; but is there not one way in which it will affect both the practitioner and his patients? I allude to the carriage of medicine. Medical men who have large country practices have no way of sending out medicine but by the mail-carts and letter-carriers who go from the towns to the adjoining villages. It is the usual custom to give the bottles merely wrapped in paper to the mailman to leave at certain places on his road. By these means patients receive their medicine in a few hours, often in places where letters would not be delivered until the next day. Now, how will the parcel post affect us? The provincial postmaster here believes a letter-carrier will not on any consideration be allowed to take anything that has not been regularly posted, and which must then be delivered in the ordinary way. Again, he asserts bottles may not now be sent by post, and presumes they will not be allowed by the parcel delivery. If he is right in his surmise, the result will be that our present arrangements will be put an end to, and no adequate means substituted. I think this is a subject of interest not only to a large portion of the profession, but also to the public.

I am, Sir, yours faithfully,

Haverhill, February 12th, 1883. B. L. TANDY.

PRESS of matter compels us reluctantly to hold over several important communications, amongst them letters from Dr. Sansom, Mr. Rawlinson, C.B., and our Newcastle correspondent, and an obituary notice of the late Dr. Mackenzie Bacon.

ERRATA.—In the article on a General Police Bill for Scotland last week, page 340, at the third line from the top of the column, read "*we* must leave out;" and at the third line from the bottom read "*inoperative*" for "imperative."

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir A. F. O. Liddell, London; Dr. Matthews Duncan, London; Dr. Slade-King, Ilfracombe; Mr. F. Treves, London; Mr. M'Gill, Leeds; Mr. Savory, London; Mr. R. Davy, London; Dr. Goodhart, London; Mr. Barber, Sheffield; Mr. E. J. C. Fear, London; Dr. Angel Money, London; Mr. Spencer Wells, London; Mr. Cæsar Hawkins, Bristol; Dr. Oxley, Liverpool; Dr. Robinson, Hull; Dr. Althaus, London; Mr. Baker; Dr. J. E. Pollock, London; Mr. A. E. Barker, London; Mr. Donovan, Cork; Dr. Goodhart, London; Mr. Allan, London; Mr. Walter Smith, Bedford; Messrs. Robinson and Sons, Chesterfield; Mr. G. Courtland, London; Dr. Currie, Sydney; Mr. Wilson, Birmingham; Mr. Russell, Liverpool; Mr. Dale, Birmingham; Messrs. Paul and Co., London; Dr. Samuel West, London; Mr. J. E. Cooney, London; Mr. Jefferis, Westgate-on-Sea; Miss Titcomb, Boston, U.S.; Mr. F. W. Lowndes, Liverpool; Mr. R. Rawlinson, London; Mr. De la Motte, Staines; Messrs. Street Brothers; Mr. G. F. Crooke, Leeds; Messrs. Savory and Moore, London; Mr. Bennett May, Birmingham; Dr. Tomkins, Manchester; Dr. Percy Boulton, London; Dr. J. Robinson, Midhurst; Mr. John Jones, Lewes; Mr. Eberle; Mrs. Bedingfeld; Mr. E. East, London; Mr. Lea, Stratton-on-the-Fosse; Dr. Owen, Brook's-bar; Mr. Macfie Campbell, Liverpool; Dr. Walker, Spondon; Mr. Jackson, Great Usworth; Dr. Usher, Yeadon; Mr. Cobb, London; Dr. Eshelby, Lymington; Dr. Champneys, London; Mr. Rankine, Sunderland; Messrs. Stidder and Co., London; Dr. Carey, Guernsey; Dr. Brailey, London; Dr. C. C. Cocks, Ross; Mr. H. H. Meyers, New Wandsworth; Mr. Allen, Peterborough; Mr. Barraud, London; Dr. W. J. Mickle, London; Mr. Laurence Humphry, Cambridge; Mr. Dalby, London; Mr. W. J. Walsham, London; Dr. Sansom, London; Mr. W. H. Neale, London; Dr. Fraser, Barsham; Madame Moore, Milan; Dr. Eshen, Philadelphia; Mr. Clement Lucas, London; Dr. Bramwell, Edinburgh; Mr. Horne, Bootham; Messrs. Sutton and Sons, Reading; Miss Rust, Glasgow; Mr. Harrison, Liverpool; Dr. Beresford, Philadelphia; Mr. Balbirnie, Manchester; Mrs. Waterland, Hull; Messrs. Turnbull and Wood, Newcastle-on-Tyne; Mr. Sampson, York; Mrs. Marsh, Upton-on-Severn; Messrs. Corbyn and Co., London; Miss Robson, Hampstead; Mr. Nead, London; Mr. Davey, Holloway; Dr. Dukes, Rugby; Mr. Hartley, Huddersfield; Mr. Buckley, Weston-super-Mare; Dr. Savage, London; Mr. Poulton, Cheadell; Dr. Hodgson, Chichester; Mr. Bate, Bassorah; Mr. Petter, Yeovil; Mr. Butler, Parsonstown; Messrs. Mottershead and Co., Manchester; Mr. Milne, Ladywell; Messrs. Low and Co., London; Dr. Macgowan, Shanghai; Dr. J. A. Campbell, Garlands; Mr. Hymus, Hatfield; Messrs. Savory and Moore, London; Mr. Scott, Manchester; Mrs. Rahn, Ipswich; Messrs. Rock and Co., London; Dr. Sturges, London; Mr. Clement Lucas, London; Dr. Cory, Buckhurst-hill; Mr. M. J. Booth, Aberdeen; Dr. Samuel West, London; Mr. Roberts; Dr. Massey, Nottingham; Mr. Denison, London; Mr. W. T. Cooper, London; F. C. B.; Chemist, Paddington; A. R. P.; E. C., Kew-green; L., Manchester; W. A. S., Heathfield; T. C. M., London; M.B.; Kismet; Shanghai; A Young Practitioner; Subscriber; M.B. Aber.; Veritas; Uncommercial Traveller; L.R.C.P. Lond.; A Subscriber to the Hospital; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Brown, Newark; Mr. Fairbank, Windsor; Mr. Jude, Beccles; Mr. Ebsworth, East Retford; Mr. Mackay, Esk; Mr. Lea, Stratton; Mr. T. Cooke, London; Mr. Laing, Walthamstow; Mr. Edgill, Chorlton; Mr. Inkey, Swansea; Mr. Tweddle, Hartlepool; Dr. Jacob, Callan; Mr. Pace, Newcastle-on-Tyne; Mr. Routledge, Buxton; Messrs. Godfrey and Co., Northampton; Mr. Patchett, Chipping; Mr. Holden, Hull; Mr. F. A. White, London; Dr. Wyer, Leamington; Dr. Lane, Victoria-park; Mr. Stevens, St. Austell; Mr. Jeffreys, Chesterfield; Mr. Kerr, Glasgow; Mr. Lacey, London; Mr. Sterdingk; Dr. E. Squire, London; Mr. De France, Aylesbury; Mr. Kinder, Leicester; Dr. Hicks, Hendon; Mr. Barlow, London; Mr. Waterland, Hull; Messrs. Hutchinson and Co., Bishop Auckland; Mr. Lutas, Liverpool; Mr. Newcombe, Boston; Mr. Harrison, Sherbourne; Mr. Laird, Gunnersbury; Mr. Arlett, Newark-on-Trent; Messrs. Porteous and Co., Glasgow; Mr. Donston, Tottenham; Messrs. Haddon and Co., Taunton; Mr. Thomas, Ross; Dr. Nolan, Brighton; Mr. May, Tunstall; Mr. Hutton, St. George; Mr. Gulliver, Banbury; Mr. Dale, Poplar; Dr. Robinson, Southam; Mr. Wheeler, Ilfracombe; Mr. Unsworth, Liverpool; Mr. Jackson, New Beckenham; Mr. Hartley, Huddersfield; G. J., Highgate; Medea; M.D.; A. C. E., York; C. F. H., London; D., Goswell-road; D. S. M., Hanley; J. P. W.; D. W., Tottenham; A. R. P.; Retland; X. Y. Z., Birmingham; Sylvia; M. O. H., Leicester; Delta; Medicus, Nottingham; M. F. A.; S. A.; Medicus, Minchinhampton; Branch, Nottingham; A. L., Sandwich; E. J., Tring; Principal, Seaford; M. C., Mile-end; G.; Apothecary, York; C. S. P., Aston; Medicus, Brixton; Omega, Leeds; M. B., Welshpool; X. Y. Z.; M. L.; &c. &c.

Commercial Review, Glasgow Evening Times, Cambrian News, The Englishman, Nottingham Journal, Northern Counties Gazette, &c., have been received.

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